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UNDERCURRENTS

The Magazine of Radical Alternatives and Community Technology

Xmas without
Television



TELEVISION?

NO THANKS

- 1 *Eddies*
- 7 *What's What and What's When*
- 9 *In The Making*
- 10 *Power Station Closures*—SERA Energy Group
Fighting the industrial vandals
- 11 *Farewell to Arms*—Dave Elliott
Turning bombs into windmills
- 12 *Atoms for Peace?*—SERA Energy Group
Why the military need civilian nukes
- 14 *Fascist Fission*—Stuart Rimmer
Brazil's nukes are going like a bomb
- 16 *Land Reform? No Thanks!*—Alan Farleigh
Why FOE scrapped their land campaign
- 18 *Greentown: Digging the Foundations*
—Godfrey Boyle
Milton Keynes' co-op village
- 22 *Computer Networks*—Dave Kanner
What information technology can do for you
- 24 *Life Without Television*—Brian Martin
Switching off the box
- 28 *Heavy Breathing*—Michael Castleman
Fags, radioactivity and the Big C
- 30 *Fiery Furnace*—Mike Talbot
A superefficient woodstove design
- 32 *Brainwashing for the Bourgeoisie*
—Jean Freer
EST is for the Best People
- 34 *Propertarians Of The Past*—Mark Pedlar
A load of old Bellocs
- 36 *The Undercurrents Review of Books*
- 44 *Letters*
- 46 *Small Ads*
- 47 *Back Numbers*
and introducing
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PWR: Sizewell seized

THE CEBG announced on October 1 that it has selected Sizewell in Suffolk as the proposed location for the first British PWR. The announcement of the site, rumoured for some time, contained an additional piece of information — the Board is likely to seek further development of the site, with the construction of another 1,200MW capacity (i.e. another large nuclear reactor, likely to be a PWR). Thus area residents face the prospect of a Sizewell 'C' as well as a Sizewell 'B'. Taken together the cost of these two reactors would pay to insulate all the houses in Britain to a high standard, saving three times the energy that the stations would produce in their lifetimes.

The Government has promised a 'thorough' and 'wide-ranging' inquiry. In his testimony to the Commons Select Committee for Energy David Howell said that a reasonable time for the inquiry would be May or June 1982. However, the Nuclear Installations Inspectorate is unlikely to complete its study of PWR safety before that date, which means that independent groups will not be allowed any time to review these studies, even if the documents were published (and there is no guarantee that they will be). The inquiry thus looks like being a mere formality, at least so far as the safety issue is concerned. (The memorandum on an inquiry into raising the permitted weight of lorries, leaked in 1978, wanted such an inquiry so that "impartial people of repute" would be seen to come to "a sensible conclusion in line with the Department's view". It is unlikely that this inquiry would differ.)

Energy conservation

The PWR announced by the CEBG will cost at least £1,500 million, with Mrs Thatcher preparing to spend £20,000 million on a programme of 10 reactors over the next decade. The contrast between this and the Government's cuts in the conservation programme is well known. What is new is that it is not just environmental groups which are raising serious doubts about the government's priorities — now the same doubts are being publicly aired by industry. The

principle that you have to invest money to begin saving energy is widely acknowledged; the journal 'Energy Management' is full of examples of companies spending to save. In the EEC a report is currently being prepared on possible economic assistance for energy saving schemes. Mrs. Thatcher's government stands alone in its misconceived notion that high fuel prices are an adequate stimulus for energy conservation — they may supply the motivation, but it is evident that they do not supply the means.

No immediate demonstration in planned against the Sizewell decision, but a Harrisburg anniversary event in the area is being investigated. Meanwhile, many of the national anti-nuclear groups came together in October and plan to co-ordinate themselves better in the future. Whether they can combat the multi-million might of the nuclear industry, we shall see . . .

(acknowledgements to Renee Chudleigh, Friends of the Earth)

Attock attack

ATTOCK PETROLEUM, part of the Exel group, has received oil exploration licences for parts of onshore Britain. Two of the licences together cover an area of some 180,000 acres in Berkshire, Buckinghamshire and Oxfordshire, the other two cover 80,000 acres of Fife. Could derricks become a part of Britain's skyline?

Carrying the can

THE ECOLOGY PARTY has produced the first major public report on the consignments of radioactive spent fuel, which are transported through London en route to Windscale.

The 88-page report: examines the possible consequences of a serious accident to a fuel flask, provides detailed background information on the nature of spent fuel, the effects of radiation, the testing of the flasks, the transportation procedures and evacuation criteria, and considers the political and ethical implications of this phase of the nuclear fuel cycle.

This account of the situation traces the discrepancies between the official view and the evidence submitted from other quarters. Among the report's conclusions are the following:

- * A major accident to a spent fuel flask could result in several thousand long-term cancer deaths.
- * Extensive evacuation is neither contemplated nor viable.
- * It has not been adequately demonstrated that the flasks are safe in relation to accident conditions that are reasonably likely to occur, nor against acts of sabotage.
- * The effects of a major accident in London would have more serious consequences for the country as a whole than a similar accident elsewhere.
- * Techniques for risk assessment need re-evaluating.

* Railway workers are being exposed to unacceptable risk.
 * The Government and representatives of the nuclear industry and British Rail are being less than candid with the public.
 Much the same conclusions came from a study prepared by the London Region Waste Transport Campaign for the London Boroughs Association. The CEBG is accused of misleading the public and the London Fire Brigade over the risks, and roles and responsibilities are still confused, according to this report. Several London Boroughs are now calling for a public enquiry into the transport of nuclear waste through London: these reports can only add to the momentum of the issue.

CARRYING THE CAN: Report of the Working Party on the Transportation of Nuclear Spent Fuel through London. Ecology Party (N. London Branch) 1980. £1.00. Copies are available (£1.20 inc. postage) from ECO, 42, Warriner Gardens, London SW11 4DU.

Carol services at points along the route of the waste will form some of the events in a "No Nuclear Waste — No Nuclear Power" demonstration, assembling at 12 noon, 22 November, Wandsworth Common, and marching to Clapham Common. Information from Dick Tapsall, London Region Anti-Nuclear Alliance, 01-688 4248.



On Sunday 21st September, more than 1000 people attended an anti-nuclear festival arranged by Sheffield Anti Nuclear Campaign. The festival had been arranged to celebrate the County Council's declaration that South Yorkshire should be a 'nuclear-free zone' (UC 42).

The festival was preceded by a week of events.

ECOSTREET

A GOVERNMENT committee is currently looking at ways of stabilising demand in the waste paper market. Maurice Millar of Coventry Friends of the Earth shows how this small step could mean a lot for a street in Coventry — and many other streets.

ECOSTREET IS the name given to a community venture in St. Agatha's Road, Coventry. Loosely managed by Coventry Friends of the Earth, it simply means that the people of St. Agatha's Road now collect all their old newspapers and magazines on a regular basis, and deliver it to the recyclers where it currently realises a price of approximately £12 per ton.

The money raised by this collection is used, in conjunction with the government home insulation grant scheme, to finance the roof insulation of the houses in the road. The actual work is done by Coventry Friends of the Earth. The houses are chosen by a draw, however in time it is hoped to insulate all the pensioners' houses in the street given that the government grant scheme continues. This very local project has helped to develop the community spirit especially as the results go to help some of that same community.

Fit to print

This Ecostreet led to an expansion of Friends of the Earth's collection scheme to include the whole of Coventry. The public response to our regular collections has been encouraging. Our collecting van is parked in Coventry City centre in the same place from 8.30 am till 4.30 pm, usually on the last Saturday of each month. We publicise this through the local press and radio and, as people deliver their paper to the van, they are given a note telling them the day of the next collection. The scheme in the city centre, after only a few months, has built up a following of regulars who bring their old newspapers each month. Once the van is fully laden it can be driven straight to the recyclers premises and unloaded. A further development of this would be to establish district collecting centres throughout the city and these would deal in recycling aluminium cans, glass bottles, used engine oil as well as paper.

Because we are now collecting from all of Coventry, the project has expanded to insulate houses throughout the city, again making use of the government grant scheme. This work was temporarily

suspended for the summer months because of the very hot working conditions in the house lofts.

This project illustrates the idea of recycling our resources. The re-use of old newspapers could, firstly, help to reduce our dependence on imports; secondly, producing paper from recycled fibre means reductions in the pollution created, the energy required and the volume of water and mass of trees used.



Ration Warning

IS THIS subtle early warning? Reports (UC42) of 1982 ration books being distributed instead of various benefit books by the Department of Health and Social Security, have been added to. "The Weekly Hibernian" supplied an account of "a humble Lurgan housewife" receiving a ration book for her daughter, instead of the Family Allowance Book she'd sent for.

Meanwhile, the *New Statesman* has asked those lucky enough to receive these heralds of 1984 to phone them, if possible, before the police arrive to abstract the evidence. Sectarians wishing to deny pleasure to the boring statist at Great Turnstile are asked to contact Undercurrents first.

A large amount of waste paper is already recycled, in fact recycled paper constitutes almost 29% of paper and board consumption in the UK. However it still takes 17 trees to produce one tonne of paper which represents 7000 newspaper copies and our UK produced wood pulp contributes only 4.3% of our paper and board consumption.

To put things in perspective, we each consumed 134 kg of paper and board in 1979, while in India, the rate was only 6kg per head of population.

Bleaching

In our consumer society we are used to white bleached paper — it is this bleaching process which is environmentally harmful. Marginally inferior quality paper would however be perfectly adequate in a great many applications: for example toilet rolls, internal correspondence in large organisations, leaflets, handbills and wrapping paper. Recycling newsprint on a larger scale is perfectly feasible if this is accepted.

The market for waste paper is particularly sensitive to slight changes in demand and any recycling scheme is vulnerable to large fluctuations in the buying price of waste paper.

Fluctuations

These market fluctuations, and ways of dampening them out, are currently being studied by a government committee reporting later this year. It is hoped that they will suggest means of stabilising the demand, and therefore the price, in the waste paper market. The demand and price for waste paper would settle if a greater use was made of it, that is if public attitudes could be changed to accept the re-use of our resources. There would then be opportunities for large scale recycling schemes which would create permanent jobs.

The Coventry Friends of the Earth Recycling Group are contributing to the welfare of Coventry by insulating homes in the city. We are also providing a focus for members of the public who recognise the daily waste of newsprint and who are glad of a means of recycling their waste paper. Furthermore we are showing that paper recycling can work and that small scale recycling schemes generating funds for community projects can be organised without the need for special facilities.

For further details contact "Ecostreet", St. Agatha's Road, Stoke, Coventry.

Maurice Millar

Federal Farms

CITY FARMS, community projects bringing farm animals and allotments on to city wasteland, are federating. The Farms, which aim to give city-dwellers first hand experience of nature and rural activities, are forming themselves into a National Federation of City Farms, which will be governed by the individual farm projects, and will aim to promote and advise new projects, as well as co-ordinating existing ones.

The formation of the Federation marks the maturity of the City Farm movement, which began in the early 70s, when Inter-Action, run by the well-

known community impresario and ego Ed Berman, publicised their Kentish Town farm (and others just got on with it). Since then, a number of ventures all over the country have been adopting the basic idea, and there are now about 30 projects on the ground and a further 15-20 in various stages of development. The Federation is taking over the work of the City Farms Advisory Service of Inter-Action, which is being both helpful and graceful in the project's hiving off, a notable contrast to the imperialism sometimes displayed by the environmental movement.

Whales Unionised

FOLLOWING A call from Liverpool Trades Council, the TUC and many of its affiliated unions are supporting a unilateral ban on sperm whale imports. Daniel Lindsay, a shop steward with the Electrical and Plumbing Union, set up an environmental committee in Liverpool Trades Council, and this is very much his work. It's particularly significant, in that the sperm whale importing is done by a Liverpool firm, Highgate & Job. Mr. Lindsay sees the campaign as wider than

whales — he wants to open the way for any member of a trade union to approach their executive for support on environmental and conservation issues, e.g. live animal exports, seal product imports and the irresponsible dumping of toxic waste. Mr. Lindsay who is also European secretary to Prevention of cruelty to Animals & Plants (PCAP) is at Broughton Drive, Grassendale, Liverpool L19 0PB.

BANG At GEC

THE GENERAL Electric Company was somewhat embarrassed when a lone protester from the Bath Anti Nuclear Group effectively managed to disrupt their annual meeting at the Institute of Electrical Engineers at Savoy Place in London.

Four people with two days' notice set the action up and managed to achieve considerable media coverage, particularly in the London region. With one person continuously on the telephone, two people handling the press and the picket outside the meeting and with one person on the inside, everything was covered. £4000 worth of shares had been signed over by a member of the Ecology Party enabling one person to get in and speak his mind freely on the implications, both financial and moral, of getting involved in the nuclear construction industry for a good two minutes before being ejected by the security guards. The implications of this action are important.

Firstly, the construction companies can be seen to be very sensitive in certain areas. GEC has designed a 660MW four-flow exhaust turbine generator for the Duvha Power Station of the Electricity Supply Commission of South Africa (ESCOM). Torness AGR, in this country, was ordered, as David Howell, Minister of Agriculture admitted, because GEC need the work to stay in the business, not because

Scotland needed the energy, they already have an overcapacity of 70%. The economics of nuclear construction are not sound and the shareholders of GEC are not particularly happy with the dividends that they are receiving at present.

Secondly, these companies, GEC and Northern Engineering Industries (NEI) are vulnerable. It's easy to get into their meetings either as a shareholder or as a proxy voter and it takes quite a while for them to eject you. As a public company that are also dependent upon public goodwill for the sale of their ordinary domestic goods. Revelations of their involvement with the nuclear industry and their hopes of winning the PWR contracts combined with a well organised consumer campaign could well affect their sales and their pocket. This, together with a public examination of their morals could well be enough to take them out of the industry.

This kind of action has been successful in the States and could well be very useful in this country, if well organised and executed. The construction companies are a weak link in the nuclear construction industry's armour, and there aren't very many of those around! For more info contact: Bath Anti Nuclear Group c/o David Taylor 13 St. James's Square Bath (319434)

Technology 1 Masses 0?

AN INTERNATIONAL conference has been rocked by the controversial claim of an English professor.

Speaking at the close of Germany's International Congress for Data Processing (IKD) Professor Robert Parlow of Brunel University made a grim prediction.

He said technology would be used as a 'tool' to control the masses by the end of 1983.

Parlow reasoned that it had created an unemployment trend which would peak in two years' time causing collapse of law and order.

And he reckoned this would give the government no other choice than to use technology 'to suppress democratic freedom'.

He insisted that his theory did not just apply to Britain but to the whole world.

'Establishment already has the means of imposing a 1984 regime', said Parlow, adding: 'Only in times of national emergency would we expect these powers to be exercised.'

'I shall show that such an

emergency will be upon us before the end of 1983.'

The main reason was the 'micro revolution' which Parlow termed 'evolution'.

Falling costs of hardware and improvement in reliability of both hardware and software had meant 'vastly' improved and cheaper products.

Robot-typists

And such economy made cost effective machines in ever-widening ranges which every businessman could afford.

Robotics had also started to become a common feature in the job world.

'A company with 1,000 executives would have at least 400 typists and 1,200 clerks and ancillary workers.'

'Word processing and electronic mail could make over half these posts redundant, and robotics will add to the one million jobs lost in manufacturing industries in the last decade.'

Even 'reactionary' organisations could not afford to miss these opportunities and Parlow predicted higher unemployment even though technology would create fresh jobs in some sectors.

'Vandalism and crime increase with unemployment. Civil unrest is already growing as demonstrated by the situation in Bristol in February where the riots were so far out of control that the Police were withdrawn from the area — this will worsen and it is very worrying,' said Parlow, quoting 'conservative' figures of 4.7 million unemployed by the end of 1983.

Computer Weekly

Grass root growth

A new wave of grass roots activity has turned the idea of 'community technology' into a practical programme. 'Local energy groups' are springing up all over the country, campaigning for more rational use and development of local energy sources, initiating local insulation programmes and setting up small scale co-operative projects.

The spate of conferences on neighbourhood energy/community technology over the last few months has given these groups an opportunity to compare notes. Like the two very successful one day conferences on Neighbourhood Energy Programmes and Appropriate Technology in Newcastle in September, and NATTA 'Community Technology Alternative Technology' conference in November.

In the wake of these gatherings the National Council of Voluntary Organisations (26 Bedford Square NW1) has launched a 'Neighbourhood Energy Action' Programme —

to 'promote and assist the development of home insulation and advice projects by local volunteer groups'. And NATTA is planning to produce a special information pack, designed to help local groups get started. (NATTA c/o Alternative Technology Group, Open University, Milton Keynes.)



Views of October 26's CND demo in London

Sun system certain

IN SANTA Clara county, California, it will soon be obligatory to fit solar energy collecting systems to all houses — whether old or new. A recently passed county ordinance, which comes into full force next year makes it mandatory to include solar energy systems (active or passive, heating or cooling) in all new house designs before planning permission is given — and anyone selling an existing house must install a solar unit before the sale can proceed.

This is not as financially punitive as it sounds. For in California there already exists a 55% solar tax credit system which means that householders and other property owners can obtain up to 55% of the cost of installing a solar unit for the state, which means a hefty subsidy and stimulus for solar development.

Spot the radical

FRIENDS OF the Earth, the well-known 'radical' pressure group, generated some pressure itself at its co-ordinators' conference recently. One veteran local group campaigner is reported to have accused the Poland Street bureaucrats of incompetence and weakness, and murmurs of approval from other co-ordinators indicated some say a crisis of confidence in FoE.

Local groups are unhappy with what they see as the absorption of FoE nationally into the blotting paper of Whitehall. The FoE bottle campaign, for returnable bottles, got bogged down in an official study, which, with industrial representatives, overrode FoE completely: yet FoE seem only to respond with a "Bottle Bill" — parliamentary action rather than the street action that made them famous. The bike campaign faces criticism from local bike groups, who accuse FoE of stealing the limelight and plan a separate co-ordinating body. Worst of all, the nuclear campaign, on which FoE spends a lot of time, money and

effort, is being overshadowed. The Cheviot Hills nuclear waste enquiry, for instance, was dominated by the Ramblers' Association and countryside groups.

On top of this, there's FoE's administration, which, following Parkinson's Law, seems to be overfilling the tiny space provided at Poland Street, and overbalancing FoE's precarious finances. There are now, supposedly, 2-3 administrators/secretaries to every campaigner.

So, with FoE being eclipsed by the Establishment, who can the frustrated radical ecofreak turn to? Well, it seems that FoE's influence has spread, and the older environmental groups are shouting louder. The Ramblers (as above) have always had a radical tradition, since the mass occupations of the Peak District in the thirties, which forced the creation of National Parks. Now the Council for the Protection of Rural England (est. 1927) has appointed Robin Grove-White as its new director. Robin will be well-known to anti-

nuclear campaigners as the co-author (with FoE's Mike Flood) of a definitive study on nuclear power's threat to civil liberties.

Of course, FoE's local groups are still strong and growing. But for how long will they support their outsize head office? (see Features for more FoE-battering)



Why is a beautiful woman like a nuclear power plant?

We Get More Radiation In Our Living Rooms Than From Nuclear Power Plants

Nuclear Power. Because America Needs Energy.

... according to US pro-nuclear groups. The old saying 'horses sweat, men perspire, ladies glow' takes on new meaning.

Chapple Frozen

A SIZEABLE part of the trade union movement is now formally anti-nuclear — NUM, NUPE, UCATT, COHSE, NUJ, with the TGWU, ASTMS & NALGO still sitting on the fence. But the NUJ's attempt to win support for an anti-nuclear amendment at the 1980 congress failed — even though ASLEF, NGA, SPOE & NAAAW (the agricultural workers) supported it.

Things may come to a head at a special conference on energy organised by the South East Region of the TUC on November 15th — and at the TUC's special Energy conference in February. No doubt Frank Chapple of the EPTU will continue to argue that we will all freeze in our beds

without nukes. This of course is something of a self fulfilling prophecy — with the CEGB busily shutting down 22 existing inner city fossil fuel plants (the ones that would be ideal for revamping as CHP units) and the Government cutting back on wavepower research and energy conservation — all in order to make way for nukes. Maybe the GMWU will come round to realizing that the 3000 redundancies that will result from the power plant closures, and the loss of jobs resulting from the Tories dismembering of Labour's £450m conservation programme, could be avoided — and indeed reversed if they too opposed nuclear power and pushed for alternatives?

Aboriginal sin

AUSTRALIAN ABORIGINES are complaining to the United Nations and other international organizations about attempts by government and industry to take away sacred land.

The Australian National Aboriginal Congress have sent a delegation to the United Nations Human Rights Commission in Geneva to try to block a plan to allow an American multi-national oil company to drill for oil on sacred land in the northern part of Western Australia. The Western Australia state government has already given permission to go ahead. The Australian federal government intervened, but after four hours of talks between aborigine leaders and Prime Minister Malcolm Fraser, no solution was found.

The head of the National Aborigine Conference, Jim Hagen, says that the federal government is refusing to use its constitutional power in the dispute, leaving the native peoples at the mercy of the state government. Delegates from

the conference will go to Geneva this week (veckan 36) to testify before the subcommittee on racial discrimination of the UN Human Rights Commission.

Meanwhile, in the Australian state of Victoria, talks have failed to resolve another land rights question, concerning 1000 hectares of forest in the south-west part of the state. Aborigines say the area has been continuously occupied by their people since before the whites arrived in Australia. They want control over parts of the forest, and reject a government plan for joint management with the State Forest Commission and the Department of Crown Lands.

The dispute intensified recently when aborigines blocked roads leading to the area. They say they plan to occupy the forest, and they are seeking international support. The native Australians say they expect assistance from the World Council of Churches in Geneva.

Pigs Out

THE BRITISH army has recently bought its first vehicles specially designed for urban internal security operations. Three AT105 armoured personnel carriers (APCs) were purchased from GKN Sankey as potential replacements for the ageing Humber 'Pig' APC, hundreds of which are in service in Northern Ireland. Both the Pig and the famous Saracen have shortcomings for use in N. Ireland, but politicians have always been reluctant to give the army a

purpose-built vehicle, fearing the hostile public reaction that would greet the sight of British soldiers being equipped specifically to fight 'British' civilians. So development work for the 'Pig' replacement was kept at arms' length by the Government, with GKN Sankey, who believe the vehicle has a large overseas market. The AT105 is a four-wheeled machine, available in six different models, including a 'Police Task Force' version. It is claimed to be proof against all small arms fire up to 7.62 calibre, and can carry up to 12 soldiers or police in full riot gear.

State Research



Take-away chips

THE LAST thing you might expect to see in the rundown urban wasteland of Notting Dale in West London is a high technology micro-chip training centre.

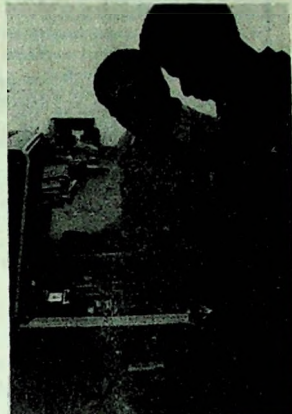
The Technology Centre provides practical electronics training for people up to 19 years old under the youth opportunities programme (YOP). Straight off the street with maybe only a CSE, kids are introduced to the micro-chip, circuit design, and system integration. The emphasis is on practical learning — from logic and circuit designs to on-the-bench circuit boards. Programming and hardware design go hand in hand and the centre is keen to explore novel, socially useful, applications of chips and data handling techniques — with a view to setting up co-operative enterprises.

But the main business at present is 'work experience' training under YOP — with typically thirty or so — mainly black — youths spending a few months at the centre. The training they receive looks excellent — far better than you'd get from a TOPS course. The centre — and others like it growing up round the country — seem likely to create a whole new generation of young experienced practical engineers... Whether conventional industry will find them acceptable remains to be seen, but the enthusiasm and application of the students at the centre has to be seen to be believed.

Naturally the centre is short of money and staff. The MSC provides some funds, as does the local council. So far industry has

not seen fit to support this project.

But at a time when youth unemployment is a growing nightmare, and 'new technology' is being preferred as the solution for 'the regeneration of British industry', projects like this would seem to be invaluable. *Notting Dale Technology Centre, 191 Preston Road, W10. 01-969 0819*



Clifford Collier and Steve Redhead testing a newly completed 'MAC' — Microprocessor Assisted Communicator. The contents of the briefcase represent the 'brains' of the communicator. The finished article connects up to a keyboard or one, two or eight switches which may be foot-operated, hand-operated, suck-blow etc. depending on the extent of the disability. MAC enables a severely handicapped person to communicate. Photo: Jenny Matthews

Madhouse

ISLINGTON COUNCIL confirmed in September a £3 per week levy on the occupants of short-life property in the borough. Sanctioned by a member of the board of Shelter (Chris Pryce, Housing Committee chairman), the levy is likely to leave a lot of useable short-life property empty, cause hundreds of evictions, and cost £500,000 to impose (gaining only £28,000 in the process). A local housing activist commented: "This is the economics of the asylum".



Excuse me little girl, I need a place to crash

Holy Smoke!

MARIJUANA, seized by the Canadian government, was burned by a Nova Scotia paper mill to generate electricity. About 22 tons of the crop, worth \$50 million on the street corners across the continent, provided heat energy equivalent to about \$100 worth of oil. The marijuana was given to the plant at no charge. Representatives of Scott Maritimes Ltd. expressed willingness to use the fuel again if the government could provide regular supplies without charge.

Smith blacked

ASK MOST people about what they'd expect to see in an old English village, and the chances are a blacksmith would be mentioned. But not by Tewkesbury Council. Francis Roberts, latest in a long line of village blacksmiths in a nearby Gloucestershire village, has been told by the council to move his forge into Tewkesbury's industrial estate. The reason he was given was that his forge doesn't fit in with "the rural setting".

Road up

HEAVY LORRIES are causing Britain's roads to crumble, according to speakers at a conference on motorway maintenance recently. From now to eternity (= the end of cars), over 5% of the motorway network will be under repair every year, and the proportion will grow as the roads spread. And this is only if the funds are forthcoming — even Government

roadies are pessimistic about the Government's ability to fork out hundreds of millions on reconstructing roads. Of course, if they were to ban heavy lorries, but such dreams are likely to become remoter. The Armitage inquiry into heavy lorries is thought by transport experts to have recommended that heavier lorries be permitted, with safeguards. So the roads will have to continue to fall into the state of repair they were in the 19th century, when there were of course railways to take people about.

All at the co-op

A NEW form of co-operative is being advocated as a practical solution to unemployment. The Neighbourhood Service Co-operative is an idea being promoted jointly by the National Council of Voluntary Organisations (NCVO) and the Co-operative Development Agency. The NCVO already services a number of Youth Opportunities Community Service schemes, and their concern at the lack of local employment opportunities has led to the new initiative.

Typically, a NSC would employ a small number of full-/part-time employees, but would also encourage active participation from volunteers in the community which it serves. In this way it could draw on a wide range of skills, energy and

resources in developing small-scale employment opportunities.

Projects undertaken might include contract gardening, home insulation, community and child-care schemes etc. The co-operative would be self-financing and run on a one member-one vote basis. Community service scheme sponsors are already keen to set up permanent employment, and the joint NCVO/CDA initiative is likely to be popular. The CDA is producing an information pack for would-be co-operators. *Further information from: Rod Barr, CDA, 20 Albert Embankment, London SE1 (01-211 3000) Stephen Hopwood, NCVO, 26 Bedford Square, London WC1 (01-636 4066)*



Cartoon: Transport Retort

Free radio news

AN ECOLOGICAL radio station has been heard making some very low power test broadcasts on 4,433KHz short wave.

The name of the station is Green Radio, programmes consisted of pop & rock music interspersed with pro-ecology statements and addresses of various ecological organizations.

It is believed that Green Radio hopes to start broadcasting with a high power transmitter in the New Year on a different frequency, although at the moment they are having trouble in getting a better transmitter.

RADIO CAROLINE, Britain's first and last floating radio station will be back on the air within the near future, according to sources "close" to the station management. —Reports that a ship was in position in mid-October have been dismissed by the same source as "nonsense", although plans for a return are well underway.

Listeners to Radio Caroline however, are not totally without regular doses of music, as a station called Radio Caroline Shortwave is on the air on 6835 KHz every first and third Sunday of the month, and will stay broadcasting until the return of Caroline to 319 metres.

Staff on Caroline Shortwave are: Freddie Archer (Head DJ) Dave England, Dave Kane and John Turner. Although the station is thought to have some link with the official Radio Caroline, none of the regular DJs on Caroline Shortwave have made any broadcasts from the ship — under those names, at any rate!

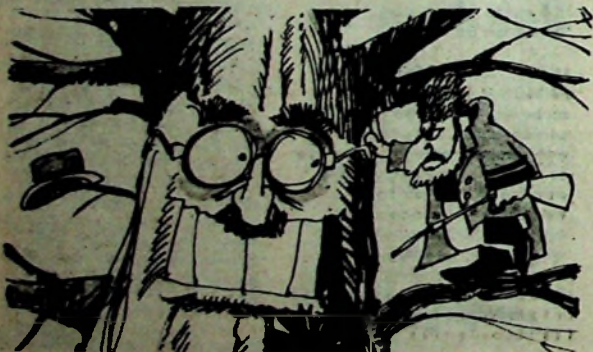
THE ADDRESS of Radio Julie is Now: Radio Julie, c/o P.O. Box 110, Orpington, Kent.

RADIO MI AMIGO the Flemish/Dutch offshore station will not be back, at least not this year. This is due to the fact that backers behind the station pulled out. The last ship that the station owned was left to the mercies of the sea by the owners, the crew asked a passing police launch to save them, as the owners (led by Belgian biscuit maker Sylvan Tak) for some reason, would not send out a tug to save them of the ship!

Another Dutch/Flemish station Radio Delmare has dropped plans for an immediate return to the air as they have had about three ships taken by the Dutch police, and the station Transmitter Engineer has had to go and do his 'national' service with the Belgian army!

Martin Scholes

Stumped



THE SOVIET Newspaper *Izvestia* recently claimed that two American diplomats planted an electronic spying device inside a tree stump near a Moscow military installation. The subterfuge was discovered because the fake tree was the only pine stump amid a grove of aspens.

EW Journal

Protopia revisited

"... thus makes it possible for me to do one thing today and another tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticise after dinner, just as I have in mind..."

The author of this gem, of course, was Karl Marx, in uncharacteristically lucid vein, in his

essay *The German Ideology*, written in 1845-6. We had seven entries, four correct, two offering Henry Thoreau, and one Pliny (let no-one say our readers are uncultivated!). The two prize winners picked by our random number generator were Michael Richards of Oxford and O Moss of London SW16, who each get a one year free sub to UC.

FRDTH

DUNCAN CAMPBELL must be slipping. In a *New Statesman* article he couldn't work out why Machynlleth was made a likely target for a projected Russian attack in the military exercise *Operation Squareleg*. Regular readers of UC will know that Machynlleth is where the Centre For Alternative Technology is based. (Memo to the Russians: Gerard Morgan-Grenville has moved to Crickhowell)

At a launch of JIM GARRISON's book *From Hiroshima to Harrisburg* the RT REV JOHN

ROBINSON told me he is trying to persuade DR. RUNCIE, the Archbishop of Canterbury to 'come out on the nuclear issue' Expect the official announcement soon: God is against the Nukes...

NICK ALBERY, organizer of the forthcoming Fourth World Assembly was complaining that Assembly President Gwynfor Evans had called off his hunger strike 'It would have been really good publicity if he'd starved to death.' John Seymour at the meeting had to leave early because of a pressing appointment with his latest whisker-cutter.

Wish I had whisksers... In the next issue of UC we will fearlessly expose whether this Fourth World binge is ideologically sound. Has the emperor got any clothes on (or has his whisker-cutter pinched them again)...

The Green Alliance also known as the Green Mafia has a new boss. She is MARGARET BAIN an ex Scotsnats M.P., obviously down on her luck. They required someone 'with a sense of humour able to argue the toss with cabinet ministers'...

Incidentally, now that UC has been in Private Eye's Pseudos Corner again (a Phil Brachi purple passage) does editor RICHARD INGRAMS know that AUBERON WAUGH is a member of the elite Green Mafia. I think he should be told...

After a doom laden 10th anniversary issue 'I am now convinced the ecological game is up' (N Hildyard) the last issue of 'The Ecologist' was devoted to the glories of cannabis and hemp. Free samples being handed out at a press conference. I think I now understand why some of TEDDY GOLDSMITH's recent articles on Systems Theory seemed so far out...

Half a day after REAGAN was elected CHRIS SQUIRE of UC was found cowering under a desk. 'It's started already' he whimpered having heard a few explosions. However, it was only Guy Fawkes night...

The winner of the first (more rubbish gratefully received) Loony Doomster Plastic Inflatable Paradigm Shift Award For Eco-Pseudos is TOM BURKE...

What follows is a sort of Party Political Broadcast except that it's not on behalf of any party, It's on behalf of all living things. To my mind politicians are simply people who make beautiful patterns with other people, and if I were asked to define my role I would say that I was a politician and most especially an environmental politician. That's funny, I thought that 'making beautiful patterns with other people' was the reason he got the sack as Director of F.O.E. He should take heart from the International Times entry in In the Making: 'We believe everyone is O.K. deep down inside'...

A final Yuletide thought from JOHN DE RIVOS who is writing us an article on Cryonic Suspension 'Death is perhaps the ultimate of God's throwaway universe, and its elimination is in my mind another act of conservation.' What these people don't seem to have considered is that the world might have ended already, and we're living in a kind of limbo. (Muffled screams as your correspondent is dragged down the corridor and locked up in the broom cupboard for another two months...

LOONY DOOMSTER

Listing

BATTERSEA POWER Station (see features) has recently been listed as a historic building by the Dept. of Environment. Protection has also been extended to the Hoover building on London's Western Avenue. Nuclear campaigners are now considering asking for the Magnox and AGR reactors to be listed, along with British Leyland's plants, British Steel's offices and other left-overs of the days before the Blue Plague of the Thatcher. After all, think of the tourist trade...

Last word



"You mean if I press this button..."

what's what

BACK STREET BUGLE

"Oxford's other paper" is a monthly paper that covers a wide variety of issues from anti-nuclear power to concerts in Oxford. All are tackled from a local angle. It also gives a list of "what's on" in the coming month and can be obtained from EOA Books, Cowley Rd., Oxford.

COMMUNITY ACTION MAGAZINE

is a bumper 50th issue. In the feature article "organising in the 80s" the magazine suggests the demands and strategies necessary for community action "in the light of the economic crisis"; main proposals are to attack private capital not just councils and to combat "the right wing ideology of much of the media". Easier said than done but worthwhile nevertheless. 40p from COMMUNITY ACTION, PO BOX 665, LONDON SW1.

BATH SPARK is an alternative paper for the Bath-Bristol area. Its Aug-Sept. issue contained articles on "Co-op closures" and "The Death of the Welfare State" as well as local news and a list of what's on in Bath and Bristol. Lively and interesting it's well worth a read at 15p for those who live in or take an interest in the area. It can be obtained from numerous alternative shops in the area or from its H.Q. at 2nd Floor, Longacre Hall, London Rd., Bath. For further info ring Bath 332111 on Monday evenings.

Also from the BATH area BANG BULLETIN can be obtained. This is the newsletter of the Bath Anti-Nuclear Group. Same address and phone number as above it is evidence of the growing strength of the anti-nuclear campaign in the south west.

We hear that the talented COVENT GARDEN COMMUNITY THEATRE are working on a musical comedy on genetic engineering (?). Previous shows have buttoned up microelectronics and nuclear power with the maximum of wit and minimum of agitprop. Next may be North Sea oil. If you're looking for an informative entertainment that doesn't shove its party line down your throat, contact them at PO Box 173, London WC2; fees negotiable.

NEWS FROM NEASDEN (now at 12 Fleet Rd., London NW3) the catalogue of radical publications has had a fire in its subscriptions department: will subscribers please write to it giving their address and when they subscribed? Otherwise they won't get their copy of no. 12.

THE ECOLOGY PARTY have produced a pamphlet, *The politics of ecology*, in plenty of time for the 1984 general election. Described as 'a full explanation of our philosophy and principles' this profusely illustrated 16 page A5 pamphlet costs 20p (+20p p&p) from 42 Warriner Gardens, London SW11

ENERGY, MONEY AND YOU is an FOE information sheet which covers remarkable concisely and clearly the Energy Problem and some self help solutions. It costs 3p or 1.5p for FOE groups, SAE required if less than 10 copies ordered. Good value from FOE, 9, Poland St., London W1.

FROM THE SAME ADDRESS but for nothing you can get FOE's trading catalogue which gives prices and details of all that it sells — badges, books on energy, wildlife, transport, food, posters and tee-shirts. Yet more from the FOE arsenal. The 1981 Big Red Diary (Pluto Press) can be obtained from Poland St. at £2. Its subject is Utopias but as a contrast it also reviews the first year of Tory Government. FOE also offer "The Energy Controversy — Soft Path Questions and Answers" £4.50 for 400 pages of criticisms of and answers by Amory Lovins.

If you would rather have a calendar than a diary Surrey/Hants border FOE have the answer. An illustrated ecological calendar, A3 size can be obtained from Surrey/Hants Border FOE, 30 Florence Road, Fleet, Aldershot, Hants GU13 9LQ at 75p inc p&p (discounts for larger orders)

NORTH LONDON ANTI-NUKE GROUP will have Christmas cards for sale. Tel 272 2360 or Earth Exchange, 213 Archway Rd., London N6.

OIL'S NOT WELL is a 40 page pamphlet published by Surrey/Hampshire Border F.O.E. on the reclamation of used sump oil. At 50p (10p p&p) it is good value and can be obtained from 30, Florence Road, Fleet, Hants GU13 9LQ.

COMCOM's new handbook — "The Broadcasting of Low Gauge Video" can be obtained from Steve Herman, 90 Charing Cross Rd., London WC2 or C.A.T.S., 42 Theobalds Rd., London WC1. Cost £1.50 (p&p free); 20% discount on 5 copies or more). For budding T.V. directors it looks a good bet and explodes the myth that the unions banned low gauge video. More information from Steve Herman (01-836 5391)



CSV, COENCO and TRANSPORT 2000 have produced a school and community kit on THE SPRING GREEN MOTORWAY. The kit comprises the materials needed for a role playing game "for up to 30". Just the job for budding young environmentalists (and probably for future Ministers of Transport) it is highly recommended. It can be obtained from Advisory Service, CSV, 237 Pentonville Road, London N1 9NJ. Each kit costs £2.00 plus 30p p&p.

FROM THE MOZAMBIQUE, ANGOLA AND GUINEA INFORMATION CENTRE (MAGICI) can be obtained a new pamphlet entitled "Angola: socialism at birth". It covers Angola's struggle for independence, her relations with South Africa and southern Africa and her economic and social policies. Well worth a read for those who are fed up with the superficial and biased coverage on such African affairs which is to be found in the British Press. Cost: 50p plus p&p.

NUCLEAR POWER — NO THANKS, already widely known, is a pamphlet which has been recently updated. Originally published by CAMBRIDGE F.O.E. is 1975 it is informative, concise and very useful. 45p from FOE, BATH HOUSE, GWYDIR ST., CAMBRIDGE.

THE OTHER SECRET SERVICE: Press Distribution and Press Censorship is the latest shaft from the Minority Press Group against the monopoly power of the wholesale newsagent trade (see UC40: Not Quite Smiths); it describes the French co-operative

wholesale house Nouvelles Messageries de la Presse Parisienne set up by Act of Parliament to deal with just the problems of censorship and bias we face here, and discusses the changes in law and social practice needed to make such a scheme work here. 55p from MPG, 9, Poland St., London W1.

THIRD WORLD PUBLICATIONS

have published a COMPLETE CATALOGUE 1980-1. It can be obtained from Third World Publications, 157 Stratford Road, Birmingham B11 1RD. It is remarkably comprehensive and is divided into sections to make reference easier. Thus women, Africa, Southern Africa, Tanzania, Asia, Cuba and so on can all be looked up and relevant publications discovered. Recommended for those seeking third world information.

BIRTH CONTROL CAMPAIGN

have issued a pamphlet called "Why Late Abortion?" The argument is that although only 1% of all legal abortions happen after the 20th week it would still be a mistake to reduce the legal time limit since these often represent the most tragic and important cases. It is obtainable at 25p p&p incl. from 27-35 Mortimer St., London W1N.

The WORLD WILDLIFE FUND's catalogue of audio-visual materials contains over 30 "presentations" which you can buy from them on a variety of topics including saving the whale, rhino rhinos, elephants, penguins, gorillas, and the leathery turtles of Trengganu. The 35mm filmstrips and printed accompanying script cost from £2 to £5, with a cassette commentary an additional £2.50. Further details from WWF/IUCN Education Project, Greedfield House, Gointing Power, Glos. GL54 5TZ.

Would-be communards looking for a place in the country should get on the mailing list for the DOE's HISTORIC BUILDINGS BUREAU's quarterly circular of listed buildings for sale or to let (free from 25 Savile Row, London W1). It includes a fine selection of white elephants too big for a single family therefore difficult to sell. Included in the latest one are Brunel's Pumping House at Starcross, Devon for his Atmospheric Railway ("atmospheric" in the old sense of the word!) The railway station at Roydon, Essex, the former Liberal Club in Newcastle and many others. Best buy would seem to be Strathleven House, Dumfrieshire, built in 1890, 29 rooms plus 6 bathrooms for only 25 grand. The snag? Its in the middle of an industrial estate!

what's when

"X" BOOKSHOP COLLECTIVE wants assistance, donations and publicity to get an "alternative and non-sectarian bookshop" off the ground in the Glasgow and Clyde area. For further information contact "X" Bookshop Collective, c/o Scottish Council for Civil Liberties, 146 Holland St, Glasgow G2 or telephone Lorraine Read at (041-) 557 1872.

NATTA (Network for Alternative Technology and Technological Assessment) has published its first pamphlet entitled "Alternative Technology: An answer to the energy crisis?" Sounds interesting and can be obtained from NATTA, c/o The Alternative Technology Group, Open University, Milton Keynes, Bucks, MK7 6AA - cost 80p.

BIRTH CONTROL BY OBSERVING NATURAL CYCLES is a brief but useful booklet explaining the 2 most accurate ways for charting your monthly cycle, the temperature and mucous method. Written by women for women can be obtained from **LIFESPAN COMMUNITY COLLECTIVE LTD., TOWNHEAD, DUNFORD BRIDGE, SHEFFIELD S30 3P** for 30p + p&p.

THE WORLD ASSOCIATION FOR CELEBRATING THE YEAR 2000 (W.A.C.Y.) for short has published at 25p its quarter century edition. If you're planning to be still around then and participate in "creative behaviour" it might be up your street. Its programme can be obtained from 31 Clerkenwell Close, London EC1R 0AT or you might try its telegraphic address "HOPEFUL LONDON EC1" Yes it is.

THE TEIFI STORE is a mail order catalogue published by **CYMDEITHAS FARCHNATA TEIFI/TEIFI MARKETING ASSOCIATION** and presents the products of small businesses throughout the Teifi Valley in West Wales. Even if you can't pronounce the publishing association's name it is a fascinating document giving a brief history of each of the businesses (from clogmaking to carpenters) and giving you the chance of ordering their wares. For this it is well worth breaking your normal prejudice against glossy hard-sell mail order catalogues: its neither glossy nor hard-sell and can be obtained from **CYMDEITHAS FARCHNATA TEIFI/TEIFI MARKETING ASSOCIATION, Emylny Sg., Newcastle Emyln, Dyfed, Wales**. Simply send 20p worth of stamps.

We're always glad to publish details of events, organisations or get-togethers for our friends on these pages, but our bi-monthly schedule means that we must have plenty of warning. Unfortunately a lot of the interesting notices received were too late for inclusion in this issue. If you're planning an event, please let us know about it as early as possible even if the details of date or venue haven't been finalised. That way, we can at least give readers an idea of what's happening and an address or phone number for confirmation.

21st February South West Co-ops. Fair. Corn Exchange, Bristol.

SCIENCE AND SOCIETY is trying to organise a European Workshop from May 8 to 11 1981 at Bradford University on the subject of "science and technology as control". People with a "critical perspective whether 'left' or 'green'" are asked to submit short papers by March and register by the beginning of April. Details from **Bob Connell, Science and Society, Bradford University, BD7 1DP, England.**

THE OUTSIDERS CLUB requests handicapped artists, poets &c. who can artistically express their sexuality, need for love and/or other emotions to submit work for a special international Exhibition of Erotic Art by the Handicapped. Entries (by 28th Feb 1981) and enquiries to **The Outsiders Club, Box 42B, London W1A 4ZB Tel: 01-741 3332**

BRITISH TRUST FOR CONSERVATION VOLUNTEERS are looking for members to help with their winter programme of conservation tasks such as planting trees, cleaning ponds and clearing scrub from heathland, or you can even go along to learn how to lay a hedge in the traditional manner, make gates, or repair old flint walls. Resident tasks last one week or ten days, and if you felt like spending Christmas at Rivington, in between celebrations you would be helping with various woodland management projects and partaking, so the programme says, of the warden's special home brew. For the full programme send an SAE to the National Conservation Corps, 10-14 Duke Street, Reading, Berkshire RG1 4RU.

THE CITY UNIVERSITY ADULT EDUCATION PROGRAMME 1980-1 is obtainable from **ADULT EDUCATION, CENTRE FOR ARTS AND RELATED STUDIES, THE CITY UNIVERSITY, NORTHAMPTON SO., LONDON EC1.** Anyone interested in anything from Japanese calligraphy to The English Landscape Garden may want one. Beginners Mandarin Chinese for the Business Executive? Any takers?

INTER-ACTION PRODUCTIONS have produced an event ("An evening of theatre") called "Power Plays" and it is touring the country from Ipswich to Carlisle, Durham to Manchester. Exact information and tickets can be obtained from **Inter-Action Centre, Talacre Open Space, 15, Wilkin St., LONDON NW5 3NG** of phone 01-485 0881 and 01-267 9421.



THIRD WORLD FIRST's Sept-Oct Bulletin *Whose Survival?* is only part of that organisation's latest barrage of publications which include "A Programme for the 80s". They are also planning a National Conference on the subject of "Whose Survival?" at the Newman Rooms, St. Aldates, Oxford, April 10th-12th 1981. Booking for this and any other information can be obtained from **Third World First, 232 Cowley Road, Oxford OX4 1UH. Tel: (0865) 45678.**

In Gothenburg, Sweden from 9-12 May 1981 a European Conference on Acid Rain is being held. The idea is to look at the as yet underrated problems of acid rain which is caused by the burning of fossil fuels. More information can be obtained from **EUROPEAN CONFERENCE ON ACID RAIN, BOX 7133 S 40232 Goteborg, Sweden.**

There will be a **CO-OPERATIVE VILLAGES CONFERENCE** at Botton Village, Danby, Whitby, North Yorks, on May 2 and 3. This will be an opportunity for the several groups working to that end to meet and share ideas and for new people who wish to join them to find out what is going on. The cost will be £7.50 for adults and £3 for children. Please write to Jan Bang, Mount Pleasant, Hainton, Loughs (tel 050-781 397) with sae for details. Jan is also planning a special number of UC on the same theme and would be pleased to hear from anyone wishing to contribute.

Sunday 21st December **WINTER SOLSTICE** celebrations on the Circle Line Underground, Liverpool St, London.

July 16-18 1981. **The Breakdown of Nations—First 'Fourth World' Assembly.** Leaders and representatives of every small nation, province, clan, tribe and other ethnic groupings which have or are seeking the power of self rule are being invited. Contact: **Nicholas Albery, 24 Abercorn Place, London NW8 01T 286 4366.**

THE BLACK HILLS (SOUTH DAKOTA) INTERNATIONAL SURVIVAL GATHERING met on Sunday 27th July with over 10000 present. It wants a worldwide week of action ("education, demonstrations and non-violent direct actions") against specific multinational corporations in Spring 1981. As a predominantly anti-nuclear exercise Rio Tinto Zinc and Union Carbide are companies that have already been "targeted". They want groups who support their action to endorse their programme as soon as possible. For information write to "Call for Action", **Roger Moody, 218 Liverpool Road, London N1.**

FOUNDATION FOR EDUCATION WITH PRODUCTION is a Southern Africa based organisation which is looking into new educational patterns and methods helpful to "the needs of former colonial countries". Its basic principles are "the linking of learning with productive work and community control and involvement in education." They are holding a conference on "Education and Productive Work" from May 1-3, 1981. Conference details from **Elisabeth Bird, Extra-Mural Dept, Bristol University, 32 Tyndalls Park Road, Bristol.** Any other information contact **Anne Guest, Dept. of Economic and Social Studies, Bristol Polytechnic, Coldharbour Lane, Frenchay, Bristol (0272-) 656261.**

In The Making

The **IN THE MAKING** supplement is out now. This is the follow up to our main 1980 edition and contains more news, information, listings, reviews reflecting what's happening in the field of radical co-operation in this country. There's quite a few interesting new projects like the Tipi village or the Make-It-Yourself Project, where teenagers are encouraged to produce their own records and magazines in a co-operative way. So its well worth looking at, even if only to see how the new ITM Collective are shaping up to the joys and strains of production and if you haven't seen ITM before, a directory of people working collectively, without bosses, why don't you get hold of this years 2 issues and have a good read.

ITM 7 1980 PLUS SUPPLEMENT (just out) £1.30

from 44 Albion Road, Sutton, Surrey.

On this page, which we hope to produce erratically but enthusiastically whenever we're bursting with new things to tell you, we've included a few of the new entries in the supplement plus some that were too late for inclusion.

As always we'll be publishing new stuff in the next 1981 edition due out March/April so if there's a project or event you think we should know about write to us at address below.

At the moment we are operating from a temporary office in North London. If you're interested in helping with ITM we are holding a series of meetings throughout the winter.

For further info write to **44 Albion Road, Sutton, Surrey.** (all mail here please!) or ring **01-226 1799.**

CHIEFTAIN INDUSTRIES

A small Scottish co-op which since 1971 has produced and marketed various energy saving heating systems is hoping to manufacture a range of heat pump heating units (these extract heat from natural sources, air, soil, water and concentrate it elsewhere). They're looking for £50 thousand from small investors to move into a new factory, where its hoped they'll be able to increase production and take on new members.

CHIEFTAIN INDUSTRIES
Grange Road, Houston Industrial Estate, West Lothian, Scotland. (Livingston 32223)

NEW LEAF CO-OP

Started in May we are a co-op collecting waste paper of any kind (in the Hackney area) for recycling.

100 Greenwood Road, London E8 (01-254 0692) (ring between 4 and 6 pm for collection)

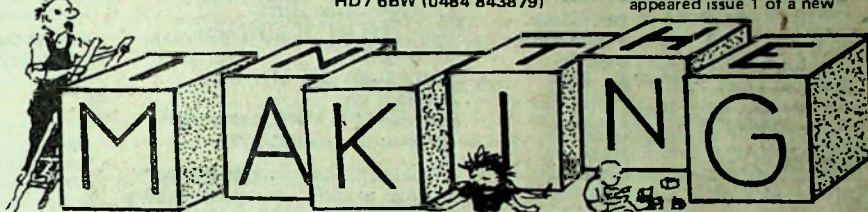
REDKITE SOFTWARE LTD.
59 Kilvey Terr, St Thomas, Swansea.

Teaching and advice on use of computer and microprocessing equipment and systems.

PROPER JOB CO-OP,
Elwin Cottage, Well Lane, St Clear, Liskeard, Cornwall (Liskeard 45308).
vegetarian wholefood restaurant.

PHOENIX RECYCLING,
289 Croxsted Rd London SE21 8NN (01-670 3380)
recycling waste materials and selling products made from recycled materials.

HATTERS LTD.
21 Newmarket St., Colne, Lancs.
wholefood cafe and bookshop.



OTLEY WOODWIND,
6, Branksome Terr, Leeds 6.
repairing woodwind instruments.

A DISTRIBUTION

Following an exciting series of meetings in London a group of alternative newspapers and magazines has come together to launch a new venture, 'A Distribution'.

This initiative arose from the general feeling that the vast pool of potential readers was not being efficiently tapped. It was also realised that individual distribution of these publications was causing unnecessary administration for the small bookshop.

The scheme is essentially co-operative with papers working together to send out copies all over the country. It is hoped that this will make distribution cheaper for the participants and that a common invoicing system will help the small shop when it comes to making payments. Below are the papers currently involved. It is hoped that this list will grow as the scheme establishes itself.

Cienfuegos Press Anarchist Review, IT, New Reality Comic, Xtral, Ins and Outs Press, Black Flag, The Rafael Barrett Press, Bread and Roses, Breakout, Anarchy, BIT Overland Travel Guides.

A Distribution 182 Upper Street, London N1.

GRASSHOPPER

We are a silk screening collective 2 people working here 4 days a week, several others on a regular/occasional basis. We began last winter with a small amount of money and made our own equipment. Our first venture silk screened biodegradable plastic bags was not a huge commercial success and we have moved on to posters, badges, cards, stickers etc for groups. We hope to print T-shirts and textiles, gradually widening our creative scope in the future. We are keen to provide community access to our facilities and have lower rates for community groups and also accept work in lieu of payment. The workshop is open to others by arrangement at minimal cost. Our decision making is by consensus of those present. We would like more regular workers. Any offers?

GRASSHOPPER 23 Peel Street, Marsden, Huddersfield, W. Yorks. HD7 6BW (0484 843879)

tenance but you can also join the collective for a nominal fee (covers the cost of tools and workshop rent) and come and fix your bike here and make friends. If you're interested come along on Sundays between 2 and 4 pm. **Motorcycle Collective, 12 Castle Rd. London NW5.**

SUBSCRIBE

Subscribers receive copies of the ITM Directory plus updating supplements as soon as they come out post free.

To ensure early delivery of ITM No.8 send:
Individual: £1.50, Donation sub (if you can afford it): £3.00. Institutions (groups and co-ops too!) £3.00. Overseas: £3.00. ITM 6, 60p, ITM 5 and supplement, 50p.

BRIGHT TIMES

The Brighton based *Whole Earth* magazine died of boredom this Autumn and in its place has appeared issue 1 of a new

FREEWHEEL

Freewheel is an alternative bookshop which opened in November 1979, with a wide selection of books, pamphlets, magazines, badges and posters. The shop is used as a contact point for various local groups e.g. Anti Nuclear Campaign, Claimants Union and there's space for groups to hold meetings on the premises. We are currently increasing our facility as an information service and at the moment we have notice boards, and display posters for various groups and events. We hold info on squatting in the town. We have a library of 60's publications of poetry and magazines and wall space for photographic exhibitions. Ongoing projects are that we've just acquired an A4 offset litho press, which will be for the use of local groups and individuals. Our cafe provides tea, coffee and snacks and is growing in popularity with young people in Norwich.

The collective consists of 12 members but this fluctuates. Nobody is paid.

FREEWHEEL 56 St Benedict St. Norwich, Norfolk. (A fuller account in ITM supplement)

WOMENS MOTORCYCLE COLLECTIVE

We are a women's motorcycle collective in North London with workshop facilities and tools. At the moment we are doing a short course for basic motorcycle main-

tenance but you can also join the collective for a nominal fee (covers the cost of tools and workshop rent) and come and fix your bike here and make friends. If you're interested come along on Sundays between 2 and 4 pm. **Motorcycle Collective, 12 Castle Rd. London NW5.**

publication *Bright Times*. Different from its predecessor it has a new wave appeal and the bias is to be towards local music and visual arts.

BRIGHT TIMES No. 1 (30p, from SWEG, 11 George Street, Brighton, Sussex (Brighton 694600)).

BUILDIT

Started in 1978 as a partnership we became a registered building co-op in March 1980 and now have our own workshop. We call ourselves a co-operative build and design service which means we can do practically anything in a house from general building work and joinery to electrical or architectural advice. We are also keen to advise and give estimates for energy saving improvements.

At present there are nine of us. We have a deliberate policy of taking on unemployed people, which has certainly stretched our skills to ensure a satisfactory job but seems to be laying solid foundations for the future.

We believe very strongly in the co-operative ideal, decision making by consensus, skill sharing, non specialisation, demystifying the building process

BUILDIT, 148 Lower Cheltenham Place Bristol, BS6 5LB. (0272 555172)

20th and 22nd February. Builders Co-op Conference, Corn Exchange, Bristol. Contact Buildit. (See above).

As the recession bites deeper, and each day brings news of factory closures, layoffs and bankruptcies, the CEEB is preparing for yet another act of industrial vandalism. SERA's Energy Group investigates.

CEEB closures: SAVE THEM!

PLANS TO CLOSE sixteen power stations and decommission a further six were announced by the Central Electricity Generating Board (CEEB) on September 9th. 3,000 jobs will be lost as a result.

The prime reason for these closures is the CEEB's overcapacity in generating equipment at a time when, on one hand, demand for electricity has fallen (by 7% since last year), and, on the other, several new large nuclear and oil-fired plants are coming on stream, adding an extra capacity of over 8 Gigawatts (GW) to a generating system which already has more than ample reserve margins.

It may be logical to close old, inefficient plants when they come to the end of their useful life, but this process (involving the phasing-out of about 3 MW of capacity) has been hastened by the overcapacity problem, and by the Government's commitment to a rapidly-expanding nuclear programme which involves ordering 15 GW of nuclear capacity at the rate of the reactor (1.5 GW) a year, starting in 1982.

Instead of simply scrapping the older, fossil-fuelled generating stations, it would be equally logical to consider converting them to produce heat as well as electricity. For although they may be inefficient in terms of electricity supply alone, many of them are well placed geographically for operation as *combined heat and power* (CHP) plants, which could double their overall energy conversion efficiency.

And even if the plants themselves are too old to be converted in this way, the *sites and site facilities* are of crucial importance to the implementation of CHP schemes—in terms of their rail or road access, fuel handling facilities, etc.

If a decision is made to opt for CHP at some point in the future, then the availability of inner city or near-city sites will be vital. It would be unwise in the extreme to sell off these valuable properties, thus closing the CHP option.

Plants scheduled for closure—or mothballing which are well located

near urban populations include:

Dunston B (104 MW) near Newcastle
Huddersfield (60 MW) near Huddersfield
Bold A (128 MW) near St. Helens/
Warrington/Liverpool
Bramborough (205 MW) near Birkenhead/the Wirral
Hams Hall B (330 MW) near Birmingham
Nottingham (227 MW) near Nottingham
Blackwall (90 MW) Rotherhithe
Uskmouth A near Cardiff

Small-to-medium sized coal-fired CHP plants would be the most relevant option since presumably the UK will want to shift away from reliance on oil or gas. But some of the oil-fired plants—for example Plymouth, Tilbury, Aber-

thaw, Bankside (London) and Barking (London)—could perhaps be converted to coal burning—indeed some are already dual-fuel plants.

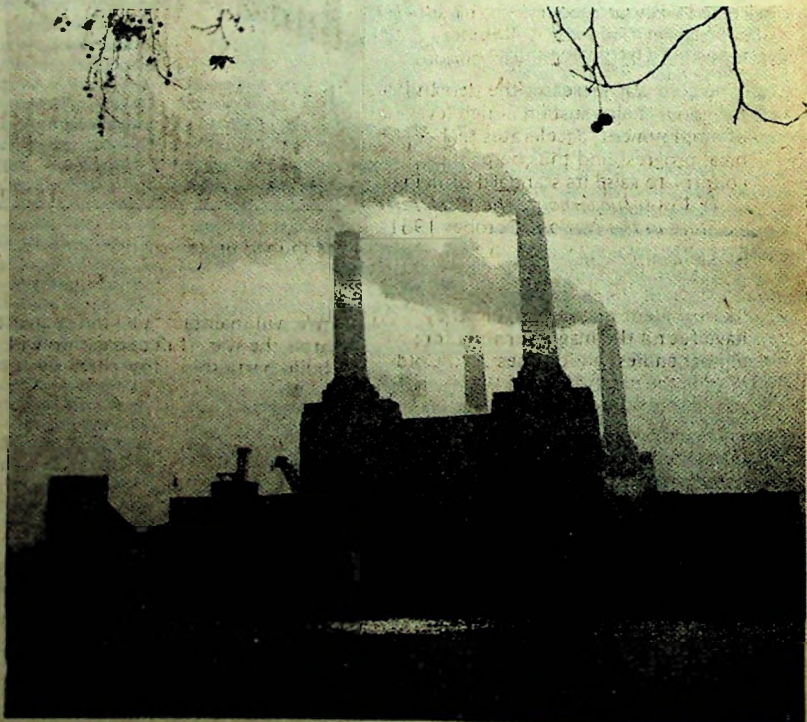
Trade union representatives in the industry have already expressed concern over the closures. The hope is that the redundancies can be avoided through natural wastage and redeployment. But with further closures likely in the future, and a gradual shift to even more capital-intensive plants, the longer term employment situation looks unattractive: CEEB employment per megawatt has dropped by half from 2.27 in 1958/59 to 1.08 in 1979/80.

A shift to CHP could not only reverse this trend in plant employment, it would also create much-needed work for the power engineering industry. Trade unionists in the supply and power engineering industry have—as do the rest of us—a common interest in opposing these closures and in calling for a national commitment to CHP, a technology which will help us use our fossil fuels more efficiently.

SERA Energy Group

■ A joint ANC/SERA campaign is being launched on this issue. Contact Frankie Ashton at SERA (9 Poland Street, London W1) or Tony Webb at ANC (256 Battersea Park Road, London SW11).

For more details of the CHP option see SERA's pamphlet *Community Heating Projects*.



Defence costs each family in Britain about £20 a week. Maybe we could spend our money more usefully? Dave Elliott looks at the implications of arms expenditure, and examines some of the alternatives.

Farewell to arms

ONE AREA of the economy that hasn't been hit by the Tories cuts is the defense sector. In the current post-detente period, the armaments industries of the world are booming.

With about one-tenth of the world's economic activity geared to defense, arms expenditure provides Governments in the West (and the East) with a significant means of economic intervention—one that totally contradicts the monetarists' insistence on non-intervention and cuts in public expenditure.

In theory, arms spending can help stabilize the economy.

As a US Government report put it: 'Heavy defense expenditure has provided additional protection against depressions, since this factor is not responsive to contraction in the private sector and provides a sort of buffer or flywheel in the economy'.

The point is that demand can be increased without recourse to the consumer market. This was well understood in the 1950's 'cold war' period:

'The cold war increases the demand for goods, helps sustain a high level of employment, accelerates technical progress and thus helps the country to raise its standard of living'.

(F.Cook *Juggernaut: the Warfare State in the Nation*. October 1961)

As an article in the *US News & World Report* put it:

'Government planners figure they have found the magic formula for almost endless good times . . . 'Cold War' is the catalyst. Cold War is an automatic pump primer. Turn a spigot, the public clamour for more arms spending. Turn another the clamour ceases . . . Cold War demands, if fully exploited, are almost limitless'.

The big defence contractors obviously win from all this—defence contracts are usually very profitable with guaranteed markets and 'cost-plus' contracts.

Defence Spending is Inflationary

And defense spending strengthens the

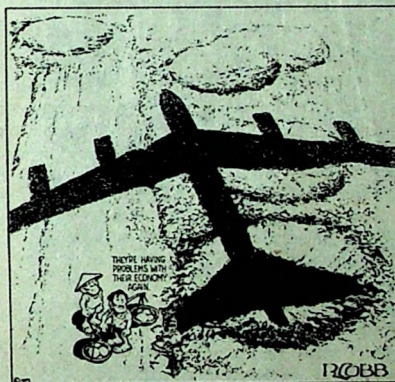
hand of the State, both internationally and at home—with Maggie screaming about the imminence of Red Invasion to distract us from the real political problems at home.

The only problem is that (especially during a recession) all this defense expenditure turns out to be inflationary—too much money (defence workers' pay) chasing too few goods (the civilian economy is deflated).

After all, *what* is produced?

Not goods that people need, just machines that sit rusting on runways and in silos.

In the run-up to the elections at the end of the second world war, a Tory



MP summed up the economic philosophy which led to this misdirection of resources:

'We will maintain full employment after the war. If necessary we will build battleships, tow them out to sea and sink them, come back and build some more'.

Defence Conversion

How can this madness be stopped? For it's not just annihilation that threatens us, but the distortion of the economy and the misuse of our scarce resources. Defence activities not only soak up capital, energy and materials—they also absorb human effort which could otherwise go into developing more efficient, rational and *needed* production systems for

the civilian economy.

This point has been clearly recognised by many workers in the defence industry. Although their jobs are at present tied to continuing defence spending, the ups and downs of defence expenditure programmes have meant bursts of unemployment and lay-offs. The industry may be *profitable*, but it's not *stable*.

Many groups of defence workers have therefore called for diversification away from military work—following the pioneering work of the Lucas Aerospace and Vickers Combine Shop Stewards Committees. In part, this is seen as a way of resolving the conflict between the policy of most unions in favour of disarmament, and their need to protect employment.

Detailed studies have shown that, in net terms, you get up to ten times more jobs by investing in civilian products than in defence, as is shown in table 1, produced by the US Mid Peninsula Conversion Project and based on US Bureau of Labour Statistics:

Table 1: Jobs per \$ Billion of Federal Spending

Trident missile manufacture	8,250
School construction	29,000
Housing	38,000
Health	46,000
Education	52,000
Public Services	102,500

Obviously, conversion of the vast defence industries would take time and would need detailed planning to avoid job loss. But, as has been well documented in studies both in the US and the UK, it is possible to make the transition without undue dislocation. Remember both the US and the UK shifted from the war production to peace production at the end of WW II with minimal strain.

There would be other positive advantages. Many of the new products that would replace military products would be in the renewable energy field—wave power devices to replace naval vessels and equipment, aerogenerator technology for the aerospace industry and so on. And the gradual substitution of wind, wave, solar etc. for oil would reduce the west's reliance on Arab oil suppliers, thus reducing both international tensions and the need for ever-increasing defence expenditure.

Turning 'swords into plough-shares' is an old idea. We may not have long to get round to it.

Dave Elliott

Footnote

*For more details of UK potential for defence conversion see '*Sense about Defence*', Quartet Books, 1979.

If you're against the Bomb, then you ought to be against 'civil' nuclear power too, say the SERA Energy Group. Here's why.

Atoms for peace

THERE ARE MANY reasons why we need to oppose both nuclear power and nuclear weapons. Nuclear energy is the direct offspring of the military nuclear weapons programme and a number of umbilical cords still firmly link nuclear weapons to nuclear energy.

Because they are inextricably linked they share the same problems, such as dangers to health and safety, lack of democratic accountability, and huge costs. And the export of nuclear energy technology leads directly to the proliferation of nuclear weapons throughout the world.

Nuclear Targets

Many people oppose nuclear weapons because of their horror at the thought of nuclear warfare and of the millions of deaths that would occur. But, in an attack, civil nuclear installations as well as military nuclear bases are likely targets. Not only do nuclear power stations supply about 13% of Britain's electricity, thus making themselves a likely target on this score alone, they also contain huge amount of radioactive material which, if released, would create far more fallout than a nuclear bomb. And the highly active wastes at Windscale contain even more radioactivity than nuclear reactors.

Even if Britain divested itself of nuclear weapons, and thus arguably became less prone to nuclear attacks, its civil nuclear power stations would still provide a target for attack by conventional weapons, including those wielded by terrorists, with results equivalent to, or worse than, a nuclear attack. The removal of nuclear weapons is not enough: civil nuclear energy installations must also be withdrawn.

Technology

The UK nuclear programme was started up in October 1945 for the sole purpose of acquiring nuclear weapons, and between 1945 and 1953 was exclusively concerned with nuclear weapons. All the factories, facilities and technology used today in the main nuclear energy cycle (i.e. fuel fabrication, enrichment, reactors, and reprocessing plant)

were originally built to make nuclear bombs. The nuclear programme involved a prodigious effort in terms of costs and resources during the period of great scarcity and rationing after World War II, but the whole apparatus was constructed and commissioned without any Parliamentary or public debate—apart from one brief sentence in a written answer to Parliament in 1948. The strict secrecy and security inherent in the weapons programme have been carried over into the nuclear energy programme, and these conflict with the need for greater democracy and parliamentary accountability.

The Calder Hall and Chapelcross reactors are still operated primarily for the production of weapons plutonium and tritium. The Windscale reprocessing station performs the important military function of reprocessing the plutonium in nuclear warheads every ten years or so; Windscale purifies the reprocessed plutonium, restoring it to weapons-grade material.

Another link between nuclear energy and nuclear weapons can be seen in the pre-eminence of the Pressurised Water Reactor (PWR) system in the United States which is largely due to the technology and expertise gained from the development and construction of the PWRs built for the US Polaris and Poseidon submarines.

Uranium

With the twin powerful interests of the defence establishments and the energy establishments of many Western countries demanding more uranium, it is little surprise that the history of uranium exploitation throughout the world has been particularly brutal. The land and resource rights of indigenous peoples in many countries have been ruthlessly trampled over; big business cartels dominate the market; and not least, thousands of uranium miners have died or contracted cancers from working in dangerous conditions. The British Government and British multi-national corporations (RTZ, Anglo-American and Rothschild) are heavily involved in this mess, and Britain is still illegally importing

Namibian uranium in contravention of United Nations Decree No. 1, 1974.

Because nuclear energy and nuclear weapons are two sides of the same coin, they share the same characteristics and dangers.

Civil Liberties

Firstly, both civil and military nuclear installations are covered by the Official Secrets Act, are policed by armed constables, and are surrounded by tight security and secrecy restrictions. The workers in both nuclear pro-



grammes are subject to positive vetting, surveillance, the use of informants, phone tapping, the infiltration of groups, the opening of mail, and the checking of bank accounts. Statutory rights to collective bargaining information, vital health and safety information, and unfair dismissal protection are severely restricted in civil as well as military nuclear plants. Perhaps most important, trade union rights to engage in collective bargaining and to withdraw labour are seriously diminished by the safety and security demands of the nuclear programme. For example in 1977 the then Energy Secretary, Tony Benn, successfully threatened the use of troops to break a seven-week strike at the Windscale reprocessing plant. Collective agreements at BNFL and UKAEA establishments contain no-strike clauses and clauses requiring trade unions to defer to managerial prerogatives.

Radiation Dangers

Secondly, nuclear energy involves the release of radiation, whether in the uncontrolled form of a bomb or in the controlled form of a nuclear power station. Both forms are dangerous to workers and to the public. Trade unions are becoming increasingly conscious of the real dangers of radiation in nuclear installations as the number of union compensation

claims for radiation-induced cancers and deaths continues to increase. The TUC is pressing for the present 5 rem per annum exposure limit to radiation to be reduced and a growing number of medical authorities and unions recommend that the maximum permissible limit should be reduced to no more than 0.5 rem. According to the latest 1978 report of the Government's Nuclear Installations Inspectorate, out of the 18,750 workers employed on licensed nuclear sites over 4,500 (24 per cent) received exposures of radiation between 9.5 rem and 5.0 rems. These are the dangers from the normal operation of the civil nuclear plants. Additional and more serious dangers arise when such plants malfunction, as at Windscale in 1957 and at Harrisburg in 1979. There also remains the unsolved nightmare of the storage of highly active waste residues.

Huge Costs

Thirdly, there is the question of huge costs of the nuclear programme. On the weapons side, it costs £165 million each year to maintain Britain's Polaris submarines and missiles; £1 billion to update the Polaris with the Chevaline programme; and an estimated £5 billion is to be spent on the US Trident system to replace Polaris. On the nuclear power side, the Government reckons that it will spend £1.5 billion each year for the next ten years (total £15 billion) on the building of 10-12 nuclear power stations; plus a further £4 billion on the construction of a breeder fast reactor station in the future. Already the nuclear programme receives massive Government funding—including £170 million per year for the UKAEA—plus undisclosed amounts from military research; the government-owned and operated fuel cycle and fuel storage facilities; plus government's underwriting of any nuclear accident in excess of £5 million; plus in future the costs of decommissioning an eventual waste storage. These colossal sums mean that vast resources are being diverted away from the crucial social needs of housing, health education and welfare to support the nuclear programme.

Fewer Jobs

Fourth, civilian and military nuclear technology share another common feature—they are both very capital intensive, which means that public investment in these technologies creates far fewer jobs than investment in other areas of the economy. For example, for each \$ billion invested in the US Trident missile production programme only

8,250 jobs were created, compared with 22,000 jobs/\$ bn for other public service jobs. Civil nuclear installations are similarly capital intensive; the Windscale expansion is costing £600 million (in 1976 £s) and will create only 1000 new jobs—that's £600,000 per job. In general terms, the nuclear programmes—whether military or civil—require about ten times more capital per job created than public works or public sector activities.

Weapons Proliferation

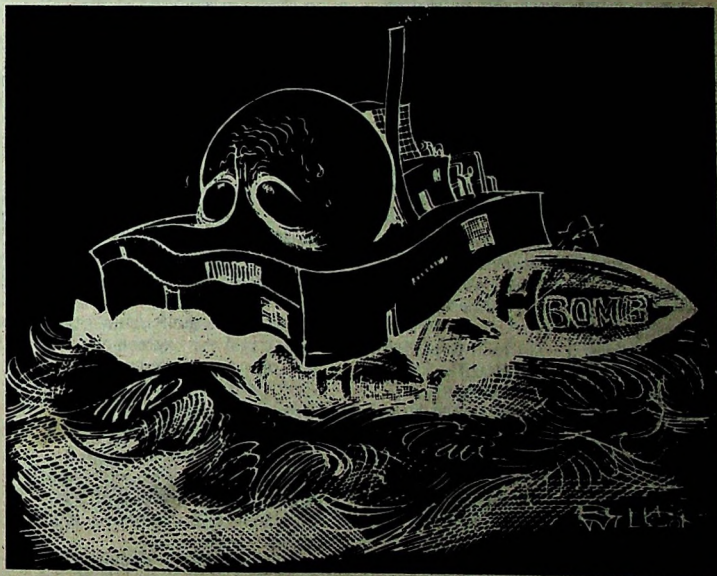
Fifth, proliferation. Although the proliferation of nuclear weapons amongst third world countries is primarily a political issue, it does have a technical dimension. Nuclear technology, research reactors and enriched fuel rods can be used, and have been used, by recipient countries to create

nuclear weapons. For example, in 1974, India managed to explode a nuclear device from the fissile material gained from the CANDU reactor given by

was no technical way of preventing countries with nuclear energy from making nuclear weapons. And it is now widely accepted that both Israel and South Africa, as well as India, now have nuclear weapons. The potential for nuclear terrorism and blackmail is obvious and clearly worried the Royal Commission on Environmental Pollution in its 1976 Report on Nuclear Power.

Atoms for Peace?

In the 1950s and 60s many people who were opposed to nuclear weapons were nevertheless strong supporters of nuclear energy under the slogan 'Atoms for Peace'. This slogan—first used by President Eisenhower in 1953—was skillfully employed by the US and UK Governments to hide the links between the civil and military nuclear programmes. An element of wish-fulfillment existed as well; many technological idealists found it difficult to connect the new clean and safe nuclear energy, which would be 'too



Canada for strictly energy purposes. Disconcertingly, the greatest demand for nuclear technology has come from countries with the most repressive regimes (Chile, South Korea, Brazil, Argentina and South Africa) and from countries hostile to their neighbours (Israel, Iraq, India and Pakistan). Of course, both the exporting and importing countries profess to believe the polite fiction that nuclear technology is for peaceful energy purposes. But the facts show otherwise. None of the countries mentioned above has signed the Non-proliferation Treaty. The International Fuel Cycle Evaluation (INFCE) Report stated that there

cheap to meter', with dirty, nasty nuclear weapons. But not only have the hopes that many had for nuclear energy turned out to be illusory, it is now clear that the links between nuclear weapons and energy cannot be dissolved. We need to be rid of them both if we want a peaceful future.

SERA Energy Group

■ Copies of SERA's leaflet *Nuclear Weapons—Energy* (on which this article was based) can be obtained from SERA (Socialist Environmental Resources Association), 11 Bland Street, London W1. Tel: 01-253 4000.

Right wing government orders nukes it doesn't need and can't afford, so it can get its hands on some plutonium for making bombs. Sounds familiar? No, it's not La Thatcher's Britain but President-General Figueredo's Brazil, as Stuart Rimmer reports.

Nazi nükes

IT WAS on World Environment Day that President-General Figueredo announced that a beautiful protected ecological-park area on the Sao Paulo State coast was to be requisitioned for the construction of a couple more nuclear power stations, kindly provided by West Germany. West Germany has been coughing loudly in the wings for some time since the signing of the extremely onesided 'agreement' by which they succeeded in foisting on Brazil power plants which nobody else wants to buy. Sharp-witted citizens had noticed that German sources had suddenly, a couple of days previously, consented to provide the loans that the US and most of Europe are now reluctant to offer Brazil, with over 100% admitted annual inflation and existing National Debt interest of 16 million dollars per day. Fixing the new area for the next nuclear menaces (when Angra 1, 2 and 3 are finished on the Rio-Sao Paulo coast) seemed to be a *quid pro quo*.

Otherwise it is difficult to explain this decision. Firstly, Brazil has more than enough hydroelectric capacity to last her into the 21st century; vegetable alcohol is only just beginning to be tapped as a resource; and the vast possibilities of solar power are being exploited only by small private firms. Moreover, the cost of nuclear electricity is four or five times that of hydroelectricity (and will certainly increase).

Secondly, virtually the entire scientific community is now against the German agreement, and a parliamentary investigation committee, plodding along since October 1978, has uncovered more and more dubious details, turning its members more and more radically against the whole thing. 'Uncovered', because the government keeps as much as possible of its nuclear plans secret, even—or perhaps especially—from Congress and from scientists.

Thirdly, it is simply not the moment for Brazil to embark on huge capital investments with no immediate rele-

vance: the country is in desperate economic straits and holds back only by the skin of its Finance Minister Delfin Neto's toothy smile from the pit of IMF-suggested 'solutions'—i.e. recession, increased unemployment, etc.—which the government well knows would be political death for it.

Bombing Along

Why do the West Germans want this agreement to go ahead with all speed? Well, there are those who say that one of the secretest clauses is something about bomb development. They recall that as long ago as 1954 West Germany secretly manufactured centrifugal plants for enriched uranium production in Brazil and was at the last moment stopped from exporting these by the

Allied High Commissioners. They point also to the frequent statements by Brazilian generals that there is 'nothing to stop' Brazil manufacturing a bomb (for example, Cde. Antonio Viana who stated before the Parliamentary committee that the 'Agreement' was signed 'not only for the generation of electricity' with full military support 'since it will make it possible for the country to manufacture atomic armaments') and the increasingly close nuclear collaboration with fascist Argentina, also a friend of West Germany's and also with a bouncing nuclear programme.

It is, besides, an urgent matter for Germany to sell a few reactors: no-one buys these any more except Brazil & Argentina, now that the Shah has gone, and KWW and other German nuclear firms are in danger of bankruptcy if someone cannot be found to buy. And this deal is a dream: the process sold (jet nozzle) is completely unproven, so the Brazilians will be the guinea pigs: and will pay to be so.

If the Agreement suited the West Germans, did it suit anyone else? It certainly suited the incredible bottomless-walleted Paulo Nogueira Batista, the president of Nuclebras, who sticks nobly to his post through scandal after scandal (though his staff come and

go like lightning: three treasurers in a year). If you read the previous article in this depressing series (UC 34) you will remember that virtually all the nuclear contracts have mysteriously gone to inept firms, usually without tender, because Sr. Paulo Nogueira fancied them. No has this stopped: the latest Nuclebras coup is to have contracted the French Societe du Cycle de l'Uranium Pechiney Ugine Kuhlmann for twice the amount actually tendered by that company. I wonder how many fingers went into that pie? Enough, anyway, to create supporters for the nuclear programme who will be loyal to the last.

The Fascist Connection

Another group greatly in favour are the Fascists. These do not exist nominally, except as paramilitary groups who kidnap 'Communist' catholic workers and priest, and burn down newstands that sell leftwing publications (the government never can find out who did these things, incidentally); but there recently came to light, by accident, a fascinating document from the Ministry of Mines & Energy's Division of Security and Information (those two newspeak titles which always refer to state spying and state lying) which purported to lay bear a conspiracy to torpedo the nuclear Agreement.

The 'conspiracy' is led by 'the Jewish community' (as the report states, in so many words) and is supported by communists (naturally) (in which groups are nominally included virtually all the nuclear scientists in Brazil, an ex-director of Nuclebras, Hince, parliamentary senators, several rich industrialists, and an assortment of ecologists) and by the US Embassy and the Russians, presumably in concert.

The 'agents' of the plot are the Press. One of the criminal things the press does (*Undercurrents* please note) is to divulge alternative sources of energy 'omitting the stage of development research is in' and contrast these with the costs of nuclear power, thus leading the public to prefer the former.

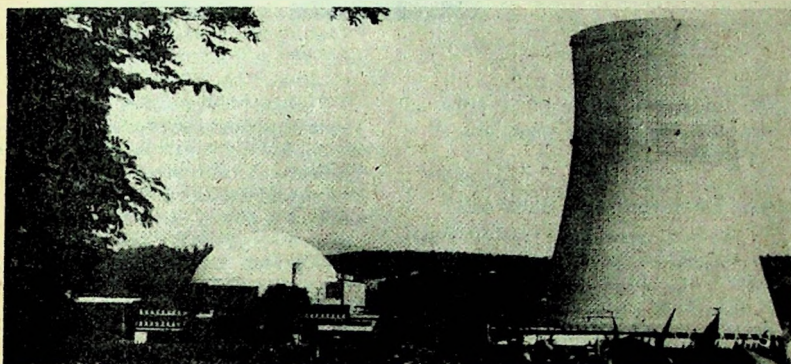
This astonishing document circulated for six months about various ministries without anyone's taking exception to it, and was leaked, by mistake, to the press. As all students of national security will have guessed, the person dismissed at the end of the day was not the nazi who wrote the document, but the general who carelessly allowed it to come to light.

The last enthusiast for the Agreement is the wheeler-dealer governor

of Sao Paulo, impeccably arab by name, and non-communist, who seems to have traded the political liability of having the new plants sited on the Sao Paulo coast against some much-needed federal financial assistance for the state. Rio couldn't have had the new toys anyway as their electricity authority is virtually bankrupt with debts caused by the Angra nuclear stations. The decision kindly to allow the S.P. authority to shoulder the new honour was taken in an odd way: the President of the company—the President, mind you—knew nothing of the deal until it was revealed by the press. Some men would have resigned in such a position, but directors of state companies in Brazil get used to being upstaged by colonels.

Fighting Back

Rio Grande do Sul state, however,



A Pressurised Water Reactor from Kraftwerk Union, similar to the reactors Germany is exporting to Brazil.

is not going to be presented suddenly with nuclear stations so easily: the parliamentary assembly voted last month—unanimously—that any nuclear programme must be authorized by the Assembly, and by a referendum of the population within 150 km of the site intended. The ineffable Paulo Nogueira, however, has said that such parliamentary resolutions have no validity; and honestly, up to now he's been dead right.

Another group against the Sao Paulo nuclear stations (not mentioned in the nazi report) is exactly that organisation of housewives that heralded the golpe (*coup d'état*) of 1964 by marching 100,000 strong through the streets 'against corruption and communism'. The government must be disturbed to see an erstwhile bigoted ally campaigning alongside jews, communists, the American Embassy and the Russians.

Naturally enough, the towns nearest the new site are solidly against. Iguape, one of them, founded in 1538,

has already a large number of historic buildings and sites listed as protected, and the local council has voted to have the whole municipality declared a preservation area. Since the announcement of the nuclear programme, tourism has dropped by half in the area, and land can no longer be sold as nobody wants to buy in that region any more. All the mayors of the whole area went to Brasilia at the end of June to fight, but returned doleful with a dusty answer.

And really the government seems resolved to rush blindly on. Enriched uranium is coming in from URENCO to be used in the Angra reactors but these are nowhere near ready. So it has to be stocked, at a vast cost. The district chosen for constructing a reprocessing plant is near the head of the river which supplies Rio and the towns near Rio with drinking

water, and is also hard by the greatest concentration of population in Brazil. This has moved the government no more than did the report in 1962 (made by scientists within Nuclebras) condemning Angra as a site for a nuclear station.

The Scientists Speak Out

The arguments of scientists, and their research, highlighting the weaknesses of the nuclear programme do not seem to affect matters either. Rogerio de Cerqueira Leite, university physicist and a member of the editorial committee of the liberal newspaper *Folha de Sao Paulo*, has stated that the bureaucrats and technocrats of Nuclebras are interested in *eliminating* informed scientific opinion, since the well-informed can criticise their work; no new nuclear courses have been started in universities for more than ten years, and most of the old ones have been discontinued. The professors in the subject have been dispersed

and given research in other areas of study.

In truth, in Brazil at least, the scientist is a political nuisance: the first person to speak out against the German deal and its economic disadvantages for Brazil (paying a fortune without, in fact, receiving any 'transfer of technology', as if, as Leite points out, Brazil were to want to learn how to build ships by buying 30 from abroad) was a scientist, not a politician or an economist. But it may be argued that the scientists will quieten down if and when they are allowed to work within the atomic programme and develop truly Brazilian radioactivity.

Some politicians (following the lead of the better newspapers) have at last woken up to the dangers both of nuclear energy (having had the illustration of Harrisburg) and of *carte blanche* deals with Germans; but the parliamentary commission of investigation has just given up the ghost, despairing of ever getting true and detailed information from the government, whose nuclear agreements and contracts are dim with secret clauses. The last straw was the fascist report, the author of which is an army officer and who the commission was (therefore) simply not allowed to call for questioning, even. Incredibly, the (civilian) minister was sent to answer instead of his junior (military) aide—and said he 'didn't know' who had written the report. The democratic facade can never be allowed to get confused with the real ruling machine—except in propaganda for overseas reading.

Finally, continuing studies about the Angra nuclear plants confirm critics' fears. A doctoral thesis on the marine life of the natural bay of Angra confirms that the cooling system of the station will warm the seawater up by 7°C and cause the death of many marine species, changing the whole ecosystem. Moreover, the study does not take into account the chemicals which are also being jettisoned into the bay. Angra 2 (built, you will recall, to inadequate specifications in an earthquake-labile area) is still having to be reinforced with pillars. The mayor of Angra has stated (English unions please note) that virtually no employment for the region has resulted from the building of the three nuclear plants.

A last poignant note: one of the farmers in the idyllic country area now scheduled for the next plague of reactors is a man who emigrated to Brazil from Japan. His last home was in the Hiroshima bomb's radiation area: he left it to be safe from such tragedy. His present home is within 50 miles of the projected site of the nuclear power stations.

Friends of the Earth's hand use campaign organiser Alan Farleigh was sacked after eighteen months when the campaign was scrapped. More in sorrow than anger, he looks back at what went wrong.

Land reform ~no thanks!



LAND IS our most basic resource. It is under continual and increasing pressure from the demands of industry and agriculture. We disrupt acres of land in search of minerals. We cover the countryside with factories and offices and we move between this unruly sprawl of towns and cities on a burgeoning network of motorways and trunk roads.

The peaceful countryside is in reality the workshop of our most extensive industry, agriculture, an industry which submits to no public control, which destroys an irreplaceable wealth of natural resources and maintains an iron grip on national farming policy.

Our use of land is short-sighted in the extreme. If we continue on the present course we shall all feel the consequences in every part of our lives: in our homes, our jobs, our travel, our food, our recreation. The disintegration is subtle and insidious. We will find, when mass commuting becomes impossibly expensive, that there are no jobs in our suburbs, that the nearest shops are only accessible by car and that there is no public transport. We shall find that our farming system collapses without petroleum and phosphorus and cheap energy, and that as food prices rise that it is too late to research and develop a less-intensive strategy. Just as safety is not the real case against nuclear power — rather that it cannot deliver the required energy, and by the time it is realised it will be too late to avoid the human suffering that will result — so it is with the land. The threat is slow and easy to shrug off, but its effects will be real and harsh.

The question posed here is whether

the environment movement is either able or willing to meet this most basic of concerns.

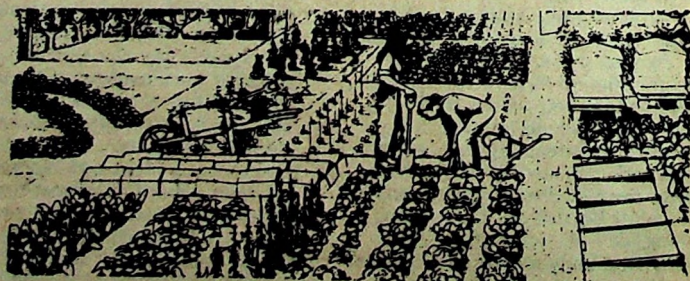
The Environmental Network

The local network of environmental campaigners is now extensive although there is little communication within it. It includes those concerned with natural history, historic buildings and civic amenity, the Friends of the Earth (FOE) and Ecology Party local groups, the city farm and allotment movements, the anti-motorway groups and those fighting specific battles such as reservoir and airport developments. They serve to focus enormous energy and concern within a well tried formula of publicity, lobbying and consultation and there is no doubt that they can succeed. However, their effect against the large-scale destruction of the environment outlined above will never amount to anything unless they can work in conjunction with a national campaign.

Two questions must be tackled. Firstly, can land-use problems (and indeed environmental problems generally) be met by discrete groups pursuing their own interests; and secondly, can a national campaign succeed using conventional pressure group tactics?

FOE local groups had been involved for some years in the whole gamut of land use issues, from allotments to Structure Plan submissions, from garden sharing to public inquiries. The groups themselves, who had already met as a planning workshop, were a strong voice in establishing the national campaign. The other impetus was the need to tie together the loose ends of other campaigns which were properly land-use issues such as the habitats work of the wildlife campaign and the planning work of the transport campaign.

We concentrated much effort on the allotments issue, a campaign already in motion and the subject of much local group activity. We were instrumen-



tal in forcing the Government to drop its proposal to allow local authorities to evict allotment holders

The other areas which FOE developed were: opposition to reservoir construction; protection of wildlife habitats; a sweeping reform of the planning laws for mineral extraction; a challenge to the Government's forecasts of air traffic growth which they use as justification for a third London airport; and criticism of the wildlife destruction wrought by massive growth in the forest industry. We were also trying to find ways of helping local groups cut through the tangled web of the planning system and of working out a coherent planning philosophy.

All these areas of concern are dependent on a national element, as the third London airport issue illustrates. When the Government announced its shortlist of six sites in 1979 there was a prompt response from the affected areas and from leading national groups including the Ecology Party, FOE and the Conservation Society. But the first meeting of the 'action committee' degenerated into the most parochial debate imaginable, each of the site groups, particularly Maplin and Stanstead, interested only in foisting the airport onto someone else's doorstep. The crucial issue was that of need and the business was to discredit the methods by which the Government devised its proposal. FOE took this position but now seems to have dropped all interest. There is no mention of the airport, or of air transport policy, in its 1980-81 strategy.

Emotive Issues

Let us turn to the question of whether or not our environmentalist vanguard is taking the right road to save the world. The end of the FOE land use campaign and before it the indefinite suspension of the transport campaign are indicative of the uncomfortable position of all environmentalists in the 1980s. The excuse for both terminations was lack of money and fund raising potential. Environmental concern is regarded by the world at large as a luxury. The less immediate and emotive the threat the lower it sinks in the pecking order. Hence, the appeal of a rational and humane system of land use, transport and agriculture is nothing to the threat of radiation induced cancer or the bloody slaughter of the whales.

However, what is seen in the movement as a financial crisis, which can be solved by pruning the budget and emulating the sophisticated use of the media already perfected by its adversaries, is also the tip of a much deeper malaise. Economic strictures are pushing the movement, but it is also pulling

itself deeper and deeper into the mainstream of politics and further away from the central issues.

There are only two organisations with a substantial claim to give the environment movement a national focus — FOE and the Ecology Party.

The Parliamentary Path

The Ecology Party is founded on the sound belief that technological tinkering with the processes of society must go hand in hand with a change in society



itself. It is founded equally on the specious belief that an ecological agenda yields of itself a political programme. Its chairman, Jonathon Porritt, states boldly that his party supports 'a more participatory, community-based democracy' (not, you note, totally participatory) and 'a radical re-distribution of wealth', and yet there they are pumping their entire effort into fielding candidates for Parliament. Greater and more capable men and women have entered those doors and failed.

At heart there is an important grain of truth in their position but it is obscured by a naive ignorance of both politics and ecology which will leave them in a pointless no-man's land on the left-right axis they believe to be so obsolete.

FOE lies at the opposite end of the



spectrum to the Ecology Party in that it stoutly avoids any overt political comment and refines its campaigning to a tightly defined strategy. This has gone way too far. Here is a national environmental body dropping its land use and transport campaigns whilst giving high priority to a bicycles campaign. This trivial and faddish issue which at best could alleviate some urban congestion and encourage a slight increase in commuting by rail retains its position whilst the two campaigns without which cycling has no relevance at all go to the wall.

The example is not isolated. There is a serious tendency to take on 'glamorous', profile campaigns which could be capably tackled by other specialist organisations, at the expense of others which are of greater fundamental importance. Of course this tendency is partly conditioned by the need to raise hard cash but it is also the result of a drift away from radical action and into the process of Government consultation.

The Lure of Influence

The lure of influence is strong, as is the need actually to affect the day to day decision making process. Issues constantly arise which can and should be dealt with effectively by a sophisticated campaign machine, but is that machine properly equipped to tackle the monumental crisis awaiting the environment? The respect of officialdom may seem like a strength but it is actually a disastrous weakness.



Presumably one has to recognise that the problems are not aberrations in an otherwise healthy world but are the direct product of a world in the throes of a terminal social and economic sickness.

At this moment FOE is the most able pressure group in its field but it will have to appreciate that politics is more than just a structure to be toyed with for the sake of limited gains. Politics are at the heart of the problems which face us and must be at the heart of the environmental battle. We have been through an inevitable period of development with the ability to sway Government decisions but we are losing sight of the enormity of the threat. The Ecology Party is indulging itself in the futile pursuit of 'green politics' whilst FOE is frittering away its energy on soft, peripheral issues.

If the environment movement does not open itself up to an urgent and thorough appraisal of its direction and purpose it will come out of the 1980s as the greatest lost cause of the decade.

Alan Farleigh

Last issue's article on 'Protopia' looked at Andrew Page's scale model of an idealised 'community of the future'. Meanwhile, back in the real world, the Greentown Group are hard at work trying to make a new community actually happen. Godfrey Boyle tells the story so far.

Greentown: digging the foundations

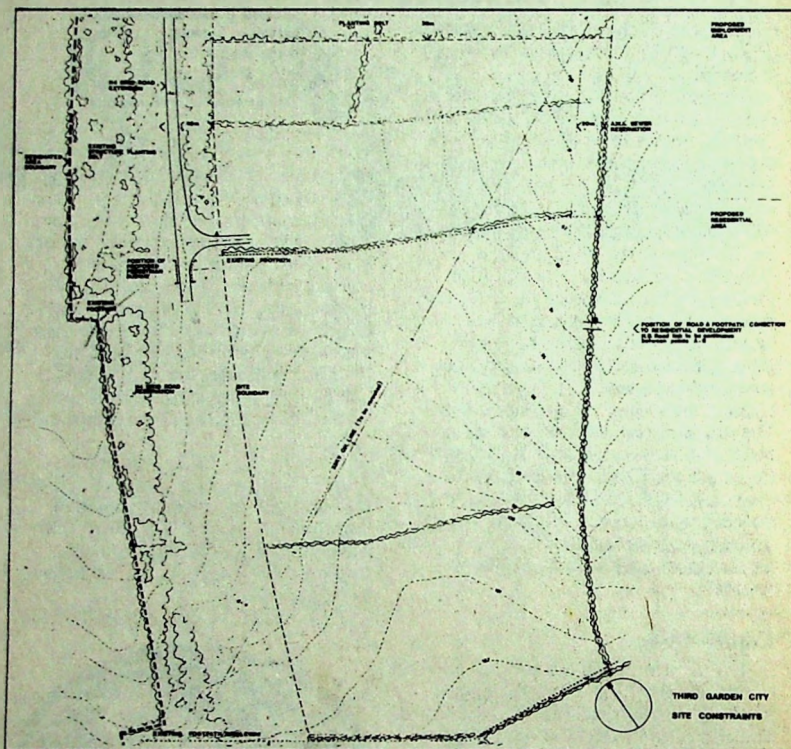
IF ALL GOES well, on a fine spring weekend about 18 months from now several hundred enthusiastic people should be assembling on a field in a corner of the brash new city of Milton Keynes in Buckinghamshire, ready to begin digging the foundations of new, co-operative, ecological community.

The project was first named, 'Green Town' by Herbert Girardet last year in *Undercurrents* 35 and though not everyone likes the name, it seems to have caught on. But the Greentown idea has been lurking for quite some time in the minds of Milton Keynes Development Corporation (MKDC) planners—and of Milton Keynes residents themselves.

Plans for Greentown only began to take off, however, in May 1978, when MKDC's chairman, Labour peer Lord ('Jock') Campbell, decided to issue a challenge to his fellow-planners at the Annual General Meeting of the Town and County Planning Association (TCPA) in London.

In his TCPA speech, Campbell suggested that the Association, which had successfully developed the twin Garden Cities of Letchworth and Welwyn under the pioneering guidance of Ebenezer Howard during the early years of this century, needed to restate Howard's ideals in a form more directly relevant to the looming problems and aspirations of the 21st century. Howard in his Garden Cities, aimed, among other things, to create small-scale settlements which would incorporate the best features of town and country living; to build an 'essentially co-operative' economy; to achieve full participation by residents in community affairs; and to allow full sharing by inhabitants in the benefits of the increasing land values which the development of their settlement would create.

As Campbell pointed out, these principles are 'as fresh and relevant today as they ever were'. He felt the time was therefore ripe for 'a new programme of action by the Association', which would 'recapture the



public's imagination and demonstrate how the Garden City, or "Country Town" as Mumford called it, is a civilising and civilised form of settlement... The TCPA, he suggested, should 'campaign for the building of a small country town set in its own belt of market garden land' and should 'encourage social change by offering greater freedom for people to build their own homes'. Campbell added that 'it should also be possible to reduce the energy requirements of the settlement to a level that the place itself might generate'. If the TCPA decided to embark on such an experimental development, Campbell believed that Milton Keynes might well be willing to allocate up to two square kilometres (200 hectares, or 500 acres) for the project.

Somewhat taken aback, the TCPA

decided nevertheless to take up Campbell's challenge, and in due course in September 1979, it published its *Outline Prospectus for a Third Garden City*. The *Outline Prospectus* envisaged a community consisting initially of around 1000 people on a site of 100 acres, growing eventually to 10,000 people on a site of about 500 acres. The 'Garden City' (though 'Garden Town' is a more appropriate term for the size of settlement envisaged) would not necessarily be sited at Milton Keynes: the TCPA was eager to interest other local authorities in the idea of building experimental communities—and indeed the Development Corporation at Telford in Shropshire recently offered the TCPA several possible sites for a Greentown-type development. But Milton Keynes remains the most obvious choice for

Greentown, because Milton Keynes issued the challenge which originally stimulated the idea.

Meanwhile, in August 1979, just before the publication of the *Outline Prospectus*, a meeting of people interested in Campbell's proposal was held during the COMTEK-79 Community Technology Festival, and a pressure group, called the Greentown Group, was formed. We now have

and GTG) which discusses and develops proposals for the settlement.

Disappointing Response

MKDC's initial response to the TCPA's *Outline Prospectus* was to offer, in principle, a site considerably smaller than even the initial 100 acres proposed by the TCPA. The first site offered was also very disappointing—criss-

ultimate objective of 500 acres or more. The TCPA feels it needs some reasonable guarantee from MKDC that Greentown will eventually be allowed to expand from the initial 34 acres to 500 acres, so permitting the community to support the full range of facilities and employment opportunities set forth in the *Outline Prospectus*. MKDC's attitude is that it cannot give a firm guarantee of expansion, but if the initial Greentown project is 'successful' (though it does not define the criteria for 'success') then it will allow expansion on to adjoining land.

Statement of Aims by the Greentown Group

We are a group of people of all ages and widely differing opinions and beliefs, but united in one aim: to live in peace and harmony with our environment and with one another, and to help others to do the same.

We seek to achieve this by living together as a caring community in which each individual shall have the maximum opportunity to make for himself or herself as many decisions as possible regarding all aspects of life, such as health, education, transport, welfare, finance, work and housing. We are determined to transcend the barriers of the nuclear family: today more than ever people need to be able to relate to others in a variety of ways, weaving constantly changing patterns of interdependence. A community which can achieve this is strong and secure and can give vital support to those in potentially stressful circumstances, for example one-parent families, the elderly, the handicapped.

Care of the Environment

We shall be making every effort to protect and care for our environment by using renewable energy sources and recycling waste. Members of the community will grow as much as possible of their own food, both collectively and individually, having regard for the needs of the soil and the highest possible nutritional content of the food. We hope to reduce our dependence on private cars, by making greater use of bicycles and community transport.

Community Industries

People will be encouraged to work within the community, in small, co-operatively run industries, producing goods both for the community and outside. Possible enterprises include: wholefood processing and distribution; design and assembly of electronic equipment; product and graphic design; and the production of equipment for harnessing renewable energy sources and for small-scale agriculture.

Life a Continuing Process of Education

The community life will be a continuing process of education for ourselves and our children. There will be co-operative workshops where people of all ages can exchange skills, and a well-equipped resource centre. These are part of plans for an alternative school system, and in addition there are conventional schools nearby, thus offering a wide choice of educational opportunities.

Positive Health

As in education, we also hope to offer more than the usual range of facilities for health. We would like to set up a health centre which will provide a wide range of alternative therapies. A meditation room will afford opportunity for physical relaxation and spiritual renewal.

several hundred members; we have a small office in Milton Keynes; we hold regular meetings to discuss and develop our ideas and to get to know one another; we publish a newsletter; and in general we try to ensure that the Greentown project doesn't get quietly buried under the mountain of paperwork, regulations and bureaucratic controls which otherwise would surely suffocate it.

A summary of some of the aims of the group is given in the Box. The Greentown Group (GTG) has been accepted by the TCPA and MKDC as the body which represents the prospective residents of the new community, and GTG members now attend the regular meetings of a 'tri-partite working group' (consisting of representatives of MKDC, the TCPA

crossed by a string of 132 kV power pylons and a grid road, and within sniffing distance of one of Buckinghamshire's notorious brickworks. But in response to strong pressure from the Greentown group, who stated flatly that the initial site was unacceptable, the Development Corporation eventually came up with a much better site, at Crownhill, near the Western boundary of Milton Keynes, just off the A5. (see map).

The Crownhill site is much more attractive than the first site offered, its only major environmental drawback being its close proximity to a new crematorium—though we have been assured that crematoria nowadays are odourless. But the size of the site offered, 34 acres (13.8 hectares), is still small compared with the TCPA's

Room for Expansion

Greentown Group members also feel strongly that Greentown ought to be able to expand. But with many members eager to get on to the site and start building a community, the Group is a little more inclined than the TCPA to accept 34 acres now in the hope of getting more later.

One way out of this impasse which has been suggested by the TCPA is for MKDC to allow the TCPA to examine, and if necessary influence, the plans currently being drawn up for the entire undeveloped area (3,000 acres or so) surrounding the Greentown site. If these plans are acceptable to the TCPA, then the TCPA may be prepared to accept the 34 acre site on MKDC's present terms. MKDC is currently considering this suggestion.

In the meantime, the Development Corporation has sent the TCPA, and GTG, a copy of its 'Development Brief' for the site. This states the general constraints—site characteristics, surroundings, landscaping criteria, roads, services etc—within which 'the Developers' (i.e. the TCPA and GTG) will have to operate. The Developers are now being asked to produce 'Development Proposal', including a 1:1000 scale plan of the site showing the layout of the proposed development and specifying the number, density, location and type of the various buildings; giving an outline time sequence of the development; stating the possible effects of the development on adjacent land; giving sample details of the building materials to be used; and putting forward an outline financial offer for the land.

Later, the Developers will be asked to provide more detailed plans, schedules and specifications, plus a detailed financial offer.

To help prepare this Development Proposal, the Greentown Group has set up six working parties, dealing with 'Decision-making and management',



At about 9.30 each morning a meeting was held to outline the forthcoming daily events and discuss/delegate the chores.

'Economic base', 'Finance', 'Planning and development', 'Welfare, health, education and leisure', and 'Utility services'. With the aid of detailed studies by these working groups, GTG hopes to have its own development proposals ready by Christmas.

Meanwhile, the TCPA, with the aid of a £19,000 grant from the Rowntree trust, is also setting up a number of working groups which will attempt to develop the ideas sketched out in the *Outline Prospectus*. The TCPA working groups, which will include GTG members, will be looking beyond the specific Milton Keynes Greentown proposals to examine ways of setting up 'Greentowns' in any and every part of the UK.

Participation

Probably the most important single aspect of Greentown, at least as far as the Greentown Group is concerned, is the principle that the process of planning and developing the settlement should involve the maximum possible degree of participation by the residents.

To help prospective Greentown residents to get to know one another better, and to get down to discussing how we would like to see Greentown develop, the Group held a very successful week-long residential meeting at Dartington Hall in Devon to August. The meeting was arranged to coincide with the Tomorrow's Village exhibition at Dartington (see UC 42) and with the visit of the Cartwheel group, who are planning a similar co-operative community elsewhere (see photographs). Incidentally, the high-technology computer system suggested in the article in UC35 on Tomorrow's Village (misleadingly entitled 'Blueprint for Greentown') is not by any means what some

of us would like to see in the real Greentown. My own view is that while there is a place for computers, they should not be used if a simple card index system, for example, or a notice board, would suffice; or where they might discourage the face-to-face contact between people which is one of the main points of a small community like Greentown. I think the main use of microcomputers in Greentown should be to carry out those information processing tasks which are too difficult to do by hand, and to facilitate communication *between* communities (rather than *within* communities), where face-to-face contact is difficult or expensive. A few microcomputers (in community centres and other public buildings) would suffice.

Money, Money, Money . . .

Needless to say, one of the most formidable hurdles Greentown must surmount is *money*.

The Greentown Group have done some rough estimates of the possible total costs of the initial phase of Greentown, including land purchase; roads; drainage and sewers; electricity supply; water supply; house building (a mixture of self-built and contractor built); a health centre; school-cum-community centre; shop/pub/cafe; farm buildings; community transport; farm equipment and building equipment. The overall estimates range from about £3 million to about £6 millions.

Not-So-Astronomical Sums

Now these sorts of sums may seem astronomically large if you're not used to them—and who is. But when you divide them among the potential population of Greentown, they don't look quite so forbidding.

MKDC's Development Brief suggests a target population density for Greentown of around 80 persons per hectare. For 13.8 hectares, this works out at a population of 1100. (The Greentown Group would prefer a lower population than this, to make more land available for horticulture, but then that leaves fewer people to pay the capital costs.) let's assume for simplicity that the population will number around 1000 residents. If we further assume that the number of people in a Greentown 'household' will be the same as the UK national average, which is 2.7 (although of course not all Greentown residents would wish to live in conventional 'households', so the Greentown average would be higher), then the number of 'households' works out at 370, and the total cost per household would be about £16,000. This sum is quite a lot less than you'd pay nowadays for



A planning 'session' inside the marquee



The crèche in full swing

a basic 3-bedroom 'semi' from a private developer—and it includes all the community services and amenities.

Self-Built and Self-Financed

Now I must hasten to say that it is emphatically *not* envisaged by the Greentown Group that prospective 'householders' must have the cash to pay £16,000 for their share in the community, or even that they should be credit-worthy enough to be able to get a mortgage or bank loan for such a sum in the conventional way—though some would probably be able to do so.

Many residents, perhaps most, would self-build their own homes, either individually or as members of housing co-operatives, living cheaply in temporary accommodation over a period of years as they do so.

As one small step towards helping members without capital to finance their share of the development, the Group plans to start a Greentown credit union. A Greentown Bank and/or a Greentown Building Society would be the next logical steps, but there are legal obstacles which need to be overcome before these can be considered.

Raising money for the communal buildings, amenities and infrastructure will probably be the biggest headache. Obviously, here again it may be possible to raise at least some of the finance for these facilities in the normal way, though banks, pension funds, insurance companies and the like. But the rates of interest presently demanded by such institutions are prohibitively high.

Nor is Greentown exactly the kind of secure, conventional venture in which most financial institutions like to sink their funds. But the Greentown Group expects that loans at reasonable interest rates could well be forthcoming from, say, the 'old' co-operative movement, which has vast assets at its disposal, or even the 'new' co-operative move-

ment, which has modest but useful funds available through, for example, Industrial Common Ownership Finance. Perhaps the Trades Union movement may also be persuaded to lend a little of its enormous resources to a project of benefit to some of its members.

Grant aid and/or low interest loans should also be forthcoming from National or Local Government bodies, or the EEC, for services (such as schools, transport, or health care facilities) which would otherwise have to be provided by the taxpayer or ratepayer in the conventional manner.

And then, of course, there are the many charitable bodies, such as Rowntree and Gulbenkian, who might reasonably be expected to give support to a project such as Greentown.

Greenie Bonds

But perhaps the best, and certainly the most direct, way of raising money for Greentown's development would be by issuing investment bonds ('Greenie Bonds?') to the public—as Ecological Lifestyle Ltd. have done with their 'Ecological Land Bond' scheme. Though such bonds would probably offer inves-

tors good security, being tied to the value of land and property, they might not pay such a good rate of interest as more conventional investments based on the more rapacious rates of return demanded by the market economy. But there must surely be a few thousand people in Britain who would nevertheless be willing to take a little of their savings out of the Abbey National to invest in a project whose financial returns may be modest but whose social and environmental returns could be enormous.

The Politics of Greentown

Greentown may well turn out to be a very nice place to live in, but what of the wider political ramifications? Will Greentown help smash Capitalism and Stalinism, Maggie Thatcher and Patriarchy? Will Greentown save the world?

On its own of course, Greentown represents only a negligible threat to the powerful multi-national interests (East and West, capitalist and state-capitalist) which still continue to exploit the earth and its peoples. But a successful Greentown could help others to form similar communities elsewhere. And a growing, world-wide federation of 'Greentowns' might someday, in concert with a global federation of workers councils, form the basis of an effective challenge to global exploitation.

One Greentown won't save the world. But a million Greentowns, linked in a global community network, may be the only thing that will.

Godfrey Boyle

■ The Greentown Group's address is 84 Church St, Wolverton, Milton Keynes. Although I am an active member of the Group, the opinion I've expressed in this article do not, of course, necessarily represent Greentown Group Policy.



Sunday August 31st The Cartwheel arrives. The 'pushers' were in fact mostly not cartwheelers but volunteers from the camp who had gone to the aid of the regular

team, knackered from their extra 'push' made to ensure the wheels arrived before the Greentown camp dispersed.

WHATEVER happened to the information society? Dave Kanner takes a look at some computerized information systems to see what they do, how they do it and what they can teach the alternative movement.

Computer networks

FOR years now people have been predicting an information explosion with the great improvements in communications technologies and the spread of cheap microprocessors ('convergence' is the buzzword). Marshall McLuhan's *global village*, James Martin's *wired society* and Alvin Toffler's *electronic cottages* are examples of over-optimistic assessments of the effect of these developments. They have been enthusiastic about what *could* be done without enquiring what *is* being done and for whom.

The majority of signals flying round the world are in digital form; computers talking to computers. The first networks were set up by the military to handle early warning (SAGE) and missile guidance or to link research establishments, often funded by 'defence'. Banks have been using centralised clearing for some ten years,

transferring cheques to magnetic tape for transport. Two years ago SWIFT (Society for Worldwide Interbank Financial Telecommunications) was set up to take the logical next step—sending the cheques electronically.

The result of all this is a great investment in telephone lines, microwave links and communications satellites with no discernable benefit to the public. Where people-oriented networks have been set up, it has been through the ingenuity and energy of computer enthusiasts in a similar way to the development of amateur radio. There is no equivalent of Citizen's Band. As Eric Lowbury put it: *'the global village is no such thing. It is global castle, in which the barons chat over their wine, while the serfs outside may overhear a few scraps of merriment.'*⁽¹⁾

Beautiful Dreams

Ted Nelson proposed a *Hypertext*⁽²⁾ database, in which each chunk of text contains pointers to related items, in the same way that the superscript 2 points to the reference list at the end of this article. In a hypertext, any keywords could lead different readers in different paths through the text, depending on their interest. If reference 2 looked interesting, you could on indefinitely, while still keeping your

place in the original work. Ted is currently trying to implement a much more modest scheme, called *Xanadu*⁽³⁾, which will encourage users to create their own indexes and publish them for others.

One development, at the Stanford Research Institute, was an on-line system (NLS), a precursor of the hypertext approach. The designer, Doug Englebart, described it as 'augmentation of the intellect'. The concept was that the user should have the greatest possible power to enter, revise, manipulate and generally fool around with text or diagrams. The people at the Augmentation Research Center were trying to simulate the 'office of the future' (in the late 60's), but so many people started using the system that they were encouraged to make it available to a wider public. The idea was taken up commercially by TYMSHARE, a computer time-sharing company with its own packet-switching network called TYMNET, under the name AUGMENT.

The Xerox corporation has a similar network of locally communicating ALTO workstations. One useful feature is the ability to display sections of different 'documents' simultaneously of different 'windows' on the screen. (Chauvinist note: Queen Mary's College, University of London, does the same thing in colour!).

The Systems

We can divide networks into three main classes: broadcast, selective retrieval and fully interactive. Broadcast systems transmit their information continuously, the receiver grabs whichever bits of it the user wants as they fly by. Selective-retrieval means that the user asks for particular information but can't alter or add to what is there. These are sometimes, wrongly, called as interactive, but '2-way' is a more accurate description. Real interaction implies that each user can both read and enter data.

Broadcast systems currently in operation include the BBC's CEEFAX (originally conceived as a way of transmitting subtitles to television programs for the benefit of deaf people) and

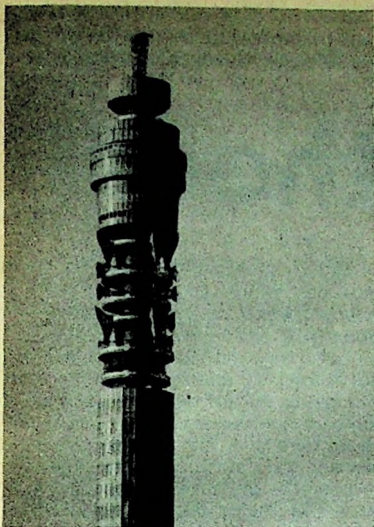
IBA's ORACLE, which are compatible, the Canadian VISTA and the French ANTIOPE, which are not. These send textual information interspersed with normal (?) TV programmes which a special decoder can translate into retrieve it, landing on the phrase quoted. From there you could go 'up' to the contents page, jump off to references in *that* document, and so letters displayed on the screen (*if you reduce the picture height on your TV you can see the Teletext information twinkling away on the top line*). The user selects a page, which is displayed as soon as it is received, by entering a number on a keypad.

A similar idea is behind the *Data-cast*⁽⁴⁾ project just starting in the 'Silicon Valley' area of California. This uses the sidebands of an FM radio station, and is received by personal computers through a decoder (similar to a stereo decoder) attached to a radio receiver. The text is transmitted between about midnight and 6 am, on the assumptions that the computer will be used for other things during the day and that it has enough storage for everything that it collects. A full DATACAST session could contain as much as 15000 pages of public announcements, want ads or sermons.

A bas, Buzby

Prestel is probably the best-known of the 2-way systems, which uses the telephone network to carry the user's requests and the computer's reply. The information appears on a modified TV, which is used only as a display device and doesn't act as broadcast receiver. Because of the restricted bandwidth of the PSTN (Public Switched Telephone Network), the transmission rate is painfully slow. Although a message exchange facility is 'projected', the 'pocket calculator' keyboard usually supplied makes it impossible to enter more than numbers and a few symbols. There are only about 5000 Prestel sets in operation at the moment, the vast majority belonging to business users, probably because of the high cost of a suitable receiver, the time it takes to do anything with it, and the restricted range of material available. Prestel, and its equivalents in Germany (Bildschirmtext) and France (Teletel) build up pictures by sending a 'mosaic' pattern to the screen with information on the brightness and colour of each spot on the screen. The Canadian 'Telidon' and the Japanese 'Captains' systems use a 'vector' technique, which gives slightly superior graphics.

The biggest drawback of Prestel, though, is access to it. Information Providers (IP's) have to stump up a considerable amount of money to



register and rent pages as well as the cost of an editing terminal to get their information onto British Telecom computers. The alternative is to find a sympathetic established IP and persuade him or her to rent you some frames and an editing terminal. Not exactly the sort of electronic wall newspaper that might persuade ordinary members of the public to contribute their ideas.

Another approach to limited participation is the QUBE cable TV system operated by Warner Communications Corp. This has a very simple set of push-buttons through which the audience can respond to opinion polls vote in talent competitions and so on, but only when permitted to do so by the broadcaster. Since part of Warner's was taken over by American Express there has apparently been increasing emphasis on 'shopping at home'.

Many heads are better than one

True interactive networks allow participants to put information into store as well as assessing what's already there. The big daddy of them all is ARPANET, set up by the Advanced Research Projects Agency of the US Department of Defense. This links some 200 mainframe computers in universities, research centres and government facilities in the US and overseas. The network can be used to send and receive mail, establish direct contact or run programs on common databases. One such connection is to the ALOHA network, which uses packet radio techniques⁽⁵⁾ to link a central computer to its terminals scattered around the Hawaiian islands.

The Community Memory Project⁽⁶⁾ now being resurrected in the Bay area of SF, is the nearest thing to a fully

participatory network. The CM people are providing linked terminals in public places on which anyone can type in messages, notices, party invitations, or whatever. This obviously could lead to abuse (in more than one sense), as users need no password or security code to get access to the system. Messages put into the system can't be modified by anyone, including the originator. They can be given a time limit, after which they are erased, or have comments added. If someone advertised an article for sale and sold it immediately, they would have to add a comment that the ad was no longer operative. When an earlier version of the system was tried out (1973-75), it attracted a lot of attention and favourable comment. I particularly liked the story of a person who put in a notice asking where to get good bagels in the Bay area. The result was three addresses of baker's shops, one recipe and the offer of lessons from a baker!

EIES⁽⁷⁾ (Electronic Information Exchange System) is a computer conferencing club which allows its members to communicate and collaborate on various special interests. Most users sign on through the TELENET. One subnetwork is looking into possible uses in neighbourhoods and local communities⁽⁸⁾. There are about thirty European members.

THE SOURCE⁽⁹⁾ is a home terminal information network, which, as it uses both TELENET and TYMNET can be dialled locally from most American cities. The information available consists of versions of the UPI news wire, the NY Times information bank, Wall St. indices and electronic mail and bulletin boards. As THE SOURCE was recently taken over by the Reader's Digest organisation, maybe we could soon look forward to the 'condensed database of the month'?

PCNET⁽¹⁰⁾ (Personal Computer Network) is a group of volunteers who have developed an electronic mail system for Commodore PET computers currently using telephone lines (they have plans to use radio soon). In UK, a variant PCNET⁽¹¹⁾ (Personal Computer Network) has started which can be used by other makes of computer. Neither depends on any central switching computer, but the UK PCNET are hoping to find a central database facility to make access possible at all times without having a lot of expensive automatic modems⁽¹²⁾. The GALDOR⁽¹³⁾ computer co-op has a auto-answer modem, suitable for personal computer use, they would be glad to hear from anyone interested in setting up a communal database.

Dave Kanner

Notes

1. In *Radical Technology*. Ed. Boyle & Harper, Wildwood House 1976.
2. Nelson, Theodore. *The Dream Machine/Computer Lib* 1974.
3. Theodore Nelson, Box 128, Swarthmore, PA 19081.
4. Wireless Digital Corp. 345 Swett Road, Woodside CA 94062.
5. Packet switching describes the technique whereby the originator (or source) of a call does not have a unique, continuous connection to the recipient as in an ordinary telephone call (circuit switching). With packet switching, each unit (phrase, sentence, or whatever) is wrapped up in an 'envelope' containing the destination address which is then put onto a series of circuits, depending on which is free at the time. With some kinds of network, it also allows the receiver to be away at the time of transmission, because the switching computer will store the message until it can be delivered.
6. Sandy Emerson, 916 Parker Street, Berkeley, CA 94710.
7. Turoff/Hiltz, Computerized Conferencing and Communications Center, New Jersey Institute of Technology, Newark NJ.
8. Peter & Judy Johnson-Lenz, 695 Fifth Street, Lake Oswego, OR 97034.
9. Telecomputing Corporation of America, 1616 Anderson Road, McLean VA 22101.
10. People's Computer Company, Box E, Menlo Park, CA 94025.
11. David Hebditch, c/o Personal Computer World, 14 Rathbone Place, London W1.
12. A modem is a device that allows computers to talk to each other over lines designed for human voices. To maintain safety, only specially designed, expensive, types can be directly connected to phone lines. The cheaper type, called an 'acoustic coupler'.
13. Galdor Computers, 52 Brighton Road, Surbiton, Surrey.

For more details, consult *Co-Evolution Quarterly*, Summer '79. (Box 428, Sausalito, CA 94965, *Dr Dobbs Journal* number 46 (Box E, Menlo Park, CA 94025) or *Next Whole Earth Catalog*, Random House, Sept '80 (available from Compendium, 234 Camden High Rd, London NW1.)

GLOSSARY

- PSTN = Public Switched Telephone Network: The ordinary phone system.
- CCITT = International Telephone & Telegraph Consultative Committee
- TELEX (note the absence of the final 't') = An upgraded telex network (with lower case letters and punctuation characters, so that the classic telegraphic 'STOP' would not be needed) intended to interconnect word-processing terminals. This is a result of a study group of the CCITT which has already led to a pilot study with 2000 terminals in Scandinavia.
- PTT = Post, Telephone & Telegraph Authority. The controlling body behind PSTN, usually a government agency. The first monopoly postal carrier was the British Post Office, set up in the reign of Elizabeth I to make it easier to monitor everybody's mail.

TELEVISION is one of the most pervasive and time-consuming forms of modern technology. Yet, unlike nuclear power, microprocessors or supersonic transports, television has seldom been the object of action or even of serious analysis by activists working towards greater democracy and self-management.

Jerry Mander in his book *Four Arguments for the Elimination of Television*¹ has gone a long way towards rectifying this lack of analysis.

Mander built himself a conventional, but highly successful, career in advertising. Then things began to change for him. In the late 1960s, in San Francisco, he began to be called upon as a media advisor by protest groups. Then he was hired by the Sierra Club, Friends of the Earth and other groups to write advertisements about ecological issues. The response of the conventional clients of his agency to these ecological advertisements and his own perception of the results of these efforts, led Mander to leave advertising and begin his investigation into the effects of television.

Mander's four arguments against television are:

1. that television reinforces the trend towards living in an artificial environment, cut off from direct knowledge of the world and susceptible to the implantation of arbitrary realities;
2. that television is technologically and economically suited to domination by corporate giants;
3. that television produces neuro-physiological effects which are probably unhealthy and which condition people to accept autocratic control;
4. that television technology is inherently more able to convey some types of information than others—and it is at its most effective when transmitting simplified linear messages, especially advertising.

These are criticisms of the technology of TV, and should not be hard to digest for readers familiar with previous critiques of technology².

Mander states that 'Most Americans, whether on the political left, centre or right, will argue that technology is neutral, that any technology is merely

Just imagine: Christmas without The Sound of Music, Walt Disney, Larry Grayson or the Queen. But would television be any better if the programmes were less imbecilic? Gerry Mander thinks not. He argues

Life Without

a benign instrument, a tool, and depending upon the hands into which it falls, it may be used one way or another'. The central point of his book, he says, is that this belief, about television as well as other technologies, is 'totally wrong'.

It does not require long memory to remember the days when it was commonly believed that nuclear power plants, and even nuclear weapons, were intrinsically 'neutral'. Even today a common attitude to nuclear power is that it would be acceptable if it were made safer, with higher standards for reactor safety, stricter safeguards against proliferation and so forth. A similar idea—still adhered to by some socialist groups—is that nuclear power is dangerous under capitalism but all right under workers' control.

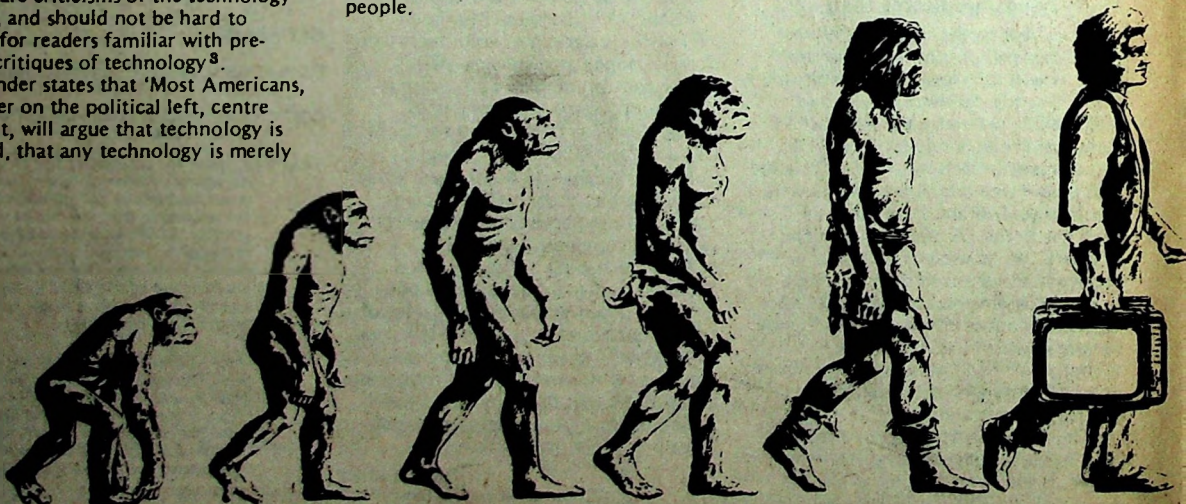
The same attitudes are even more common when it comes to television. The suggested reforms are many: promote better programming, reduce television's emphasis on violence, reduce x-ray emissions from television sets, ban offensive advertising, institute provisions for equal time for alternative viewpoints, promote community access television. But if television technology is indeed *intrinsically* biased—towards creation of artificial realities, centralised control, inducing passive behaviour and communicating simple linear messages—such reforms will merely serve to hook even more people.

Mander says that 'television, for the most part, cannot possibly yield to reform'. Hence, he argues that television *should* be *eliminated*. This may sound strange and unreal. But it was not so long ago that the idea of eliminating nuclear power or supersonic transports was just as strange. One difference is that television is well and truly institutionalised, like automobiles and nuclear weapons but unlike nuclear power and SSTs. But, as Mander concludes his book, we must 'purge from our minds the idea that just because television exists, we cannot get rid of it'.

I will not go into the details of Mander's arguments against television here, since he does that quite well in his book. But I will assume that the question of the role of television in society should be an important one for activists working towards local self-management—even if they do not fully subscribe to all of Mander's arguments and conclusions. Mander describes *why* television should be eliminated, but not *how* this might be accomplished.

Campaigning against television

There are several issues around which campaigns against television might be orientated. The comparison



that TV is *inherently* unreal, unhealthy, simplistic and authoritarian: it should simply be *abolished*. Brian Martin has been looking at what an anti-television campaign would mean.

Television.....?

between television and nuclear power is a useful one. I make it not because of any special similarity between these two technologies, but because many people have been involved in campaigns against nuclear power and are familiar with the issues and arguments.

Environmental effects. In the case of nuclear power, environmental and health hazards have been the basis for a large component of public concern. Yet many who are familiar with the issues would agree that non-environmental hazards—such as proliferation of nuclear weapons capability, terrorism, and threats to civil liberties—are much more important in a fundamental sense. It may be that environmental objections have obtained currency precisely for the reason that they do not seem to be political. The *apparently* apolitical objection thus serves as a basis for political action about a technology which does indeed have immense political effects.

Mander devotes more space to his argument 3, which is concerned with the effects of television on the human being, than to any other argument. One of the important points he makes is that there is an extreme scarcity of studies on the neurophysiological effects of television. Another problem in

documenting any health hazards is the subtlety of the effects. But the same applies to most of the health effects arising from nuclear power. A more serious limitation in using health effects as a basis for opposing television is that the hazards *seem* to be accepted voluntarily. Individual users purchase and personally interact with television technology, like automobiles but unlike nuclear power. This makes it harder to realise, at least for the purposes of political action, that the technology is being promoted by and selectively adapted for the purposes of powerful vested interests.

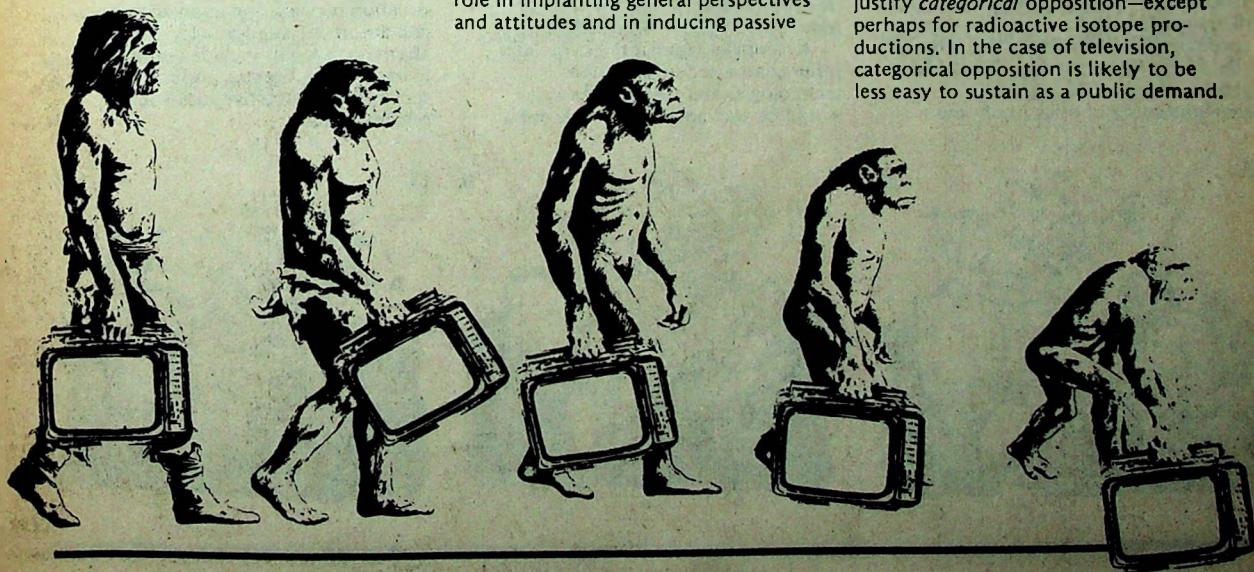
Use by elites. Centralised political and economic control is characteristic equally of nuclear power and of television. Challenges mounted against either of these technologies would also be a threat to this centralised control. In the case of nuclear power and other large-scale energy technologies, a primary factor is the sheer scale of economic investment and the enormity of the infrastructure involved in electricity grids, production facilities, energy-using equipment, urban planning and the like. Communication technologies do not (yet) rival this level of economic and structural investment. On the other hand, television is more deeply enmeshed in social and psychological patterns throughout the community, through its role in implanting general perspectives and attitudes and in inducing passive

behaviour. Thus television is useful to elite groups more through its impact on people's ways of thinking and perceiving than through any direct economic influence.

In fighting nuclear power, effective opposition has been organised relatively straightforwardly around environmental, political and economic issues, including the advocacy of alternatives. But a struggle against television may have to base its efforts on a rather deeper understanding of the psychological and ideological aspects of social control and the individual's adaptation to society.

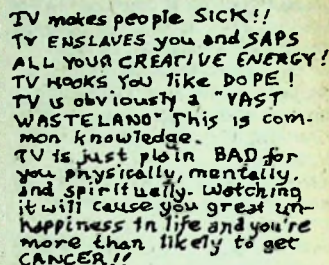
Selective usefulness. By its very nature (high potential danger, large scale, high capital cost and high complexity) nuclear power is unsuited for direct control by workers or the community. Short of developing a hypothetical clean, simple, cheap, small-scale community reactor, there seems no way to avoid this. The technology of television, on the other hand, has a greater *potential* as a self-managed community resource. Television sets, broadcasting facilities and programmes could, conceivably, be produced under conditions of worker and community control. Indeed, with cheap video equipment and increasing use of video cassettes, some of these possibilities seem to be coming nearer. However, it is not clear that these alternatives yet provide much of a threat to centralised broadcasting.

These points suggest that a campaign against television would need to consider carefully the desirability or otherwise of possibilities such as community access television. Similar problems arise in assessing some energy technologies, such as tidal power or solar power towers. In the case of nuclear technology, it is possible to justify *categorical* opposition—except perhaps for radioactive isotope productions. In the case of television, categorical opposition is likely to be less easy to sustain as a public demand.



Television, on the other hand, has a great direct impact on activists and on activism in general. Most activists—though probably a smaller percentage than the general populace—watch television some of the time. More importantly, the general level of social activism is almost certainly reduced, being displaced by the millions of person-hours spent before television screens each day. Then there are the physiological and psychological effects of television, so well described by Mander, which combine to induce passivity, to reduce touch with reality and to increase cravings for immediate stimuli and results. These effects could hardly be better designed to inhibit efforts towards long-term political organising at the grass-roots.

This suggests that a campaign against television must clearly address the need to break the television viewing habit. Those who have succeeded in doing this are prime candidates for an anti-television movement, just as cyclists are likely candidates for campaigns against automobilisation. Perhaps thought could be given to setting up Television Addicts Anonymous (TVAA), an analogue to Alcoholics Anonymous



A campaign against television and other centralised information technologies and systems likewise would be well advised to work out a

Some attention should also be paid to providing alternatives for the function of television as an anaesthetic and automatic child-minder. Such alternatives might include communal living, drop-in centres, and more sociable and attractive social action organisations.



Campaigning without television

In the meantime, activists in all movements need to consider carefully their relation to television. Here are some suggestions that seem to me to follow from what Mander has argued.

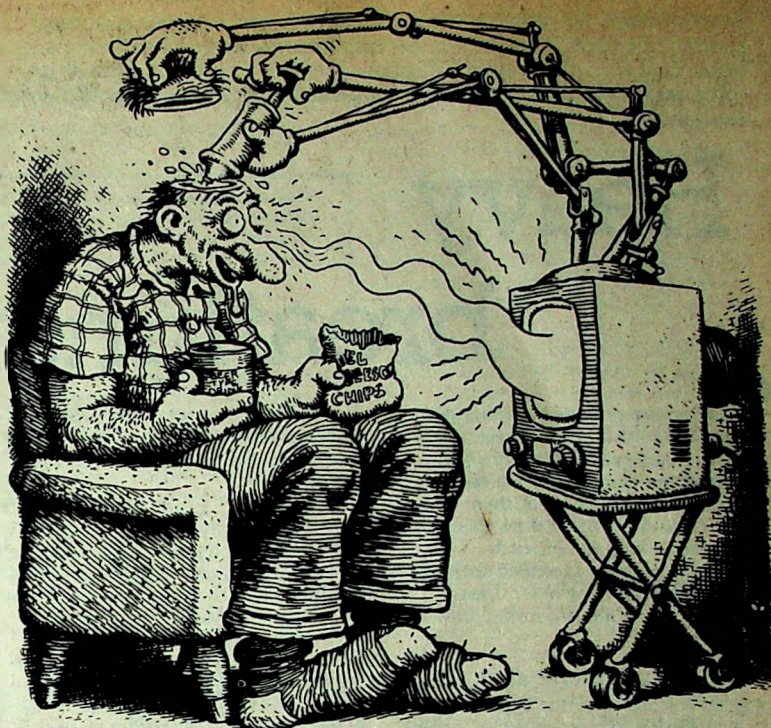
1. Individuals should watch television as little as possible. If there are significant numbers of programmes considered important by activist groups—such as daily news programmes—perhaps one or two members, rotated frequently, could be assigned the task (or pleasure?) of viewing them.

2. Television should not be used for getting one's message across. For most small grass-roots organisations this is not possible anyway. But for rich environmental organisations, some unions, and political parties, there is often a pressure to try to compete in getting one's message across on television. Completely avoiding television advertising and refusing to compete can help discredit television as a balanced medium. It might be that such a policy would lead eventually, in the manner of co-option, to offers of free time. But in any case, funds would be released for alternative modes of communication which are less inherently biased.

3. The value of publicity-seeking—demonstrations, stunts, scaremongering, contrived stories—should be carefully scrutinised in the light of television's inherent limitations. The alternatives—patient grass-roots organising, collective working out of strategies, building up local bases of support and the like—should be considered on their merits, independent of publicity value.

4. Alternative communication networks, and their relation to the group's goals, should be used whenever possible. In using television, a few people do something and many people watch. In moving towards a self-managed society, the aim should be to attain just the opposite result.

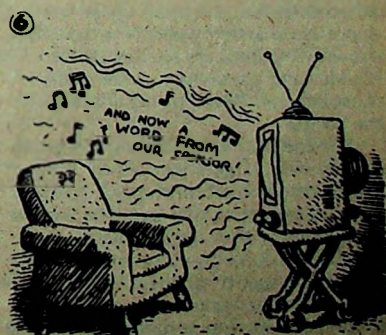
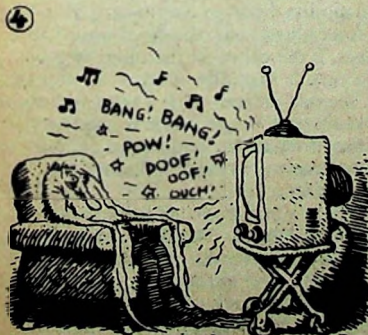
Brian Martin



R. CRUMB

Notes

1. Jerry Mander, *Four arguments for the elimination of television* (New York: William Morrow, 1978, and New English Library, London 1980).
2. Some other perspectives on television and media in general are given by Robert Cirino, *Don't blame the people: how the news media use bias, distortion and censorship to manipulate public opinion* (Los Angeles: Diversity Press; 1971), Hans Magnus Enzensberger, *The Consciousness industry: on literature, politics and the media* (New York: Seabury Press, 1974); Alan Swingewood, *The myth of mass culture* (London: Macmillan, 1977); Raymond Williams, *Television: technology and cultural form* (London: Fontana, 1974).
3. David Dickson, *Alternative technology and the politics of technical change* (London: Fontana, 1974). Godfrey Boyle, Peter Harper and the editors of *Undercurrents* (eds.), *Radical Technology* (London: Wildwood House, 1976).
4. Marie Winn, *The plug-in-drug* (New York: Viking, 1977).



Even smokers will accept a connection between tobacco and lung cancer, but contest the statistical relationship between smoking and other cancers or circulatory diseases. Michael Castleman reports on some research that suggests that radioactive particles in tobacco could explain all.

Heavy breathing

THE statistics on our number one public health hazard are unrelentingly negative. Last year nearly 100,000 people in the United States died from lung cancer, 80 per cent of them smokers. And for those smokers who didn't face a lung tumor, each cigarette drastically increased their chances of developing heart disease, or cancer of the mouth, throat, bladder or pancreas.

A perplexing problem, however, has plagued research into the cigarette-related diseases. Scientists have known for decades that smoking is associated with many serious illnesses, but they have never been quite sure *how*. The precise mechanism of cigarette-induced disease production has proved frustratingly elusive. And this lack of proof has contributed to the perpetuation of certain myths that keep smokers smoking. For example, there is the 'organic gardener's myth' that the chemical additives used in commercial cigarette production are the cause of smokers' health problems.

It makes sense that cigarette smoke, which contains many proven chemical carcinogens, should cause lung cancer from simple accumulation over time. But despite tens of millions of dollars spent on research, scientists still do not understand why smokers are at risk for heart disease, but specifically atherosclerosis, the build-up of fatty deposits on artery walls. Nor have they shown why smokers are at risk for bladder and pancreatic cancer. Why those organs? Why not others closer to the lungs?

For the past 16 years, a small group of scientists, largely ignored by the cancer research establishment, has gathered evidence that appears to solve the riddles of the cigarette/disease mechanism. Like so many other scientific break-throughs, their view, called the 'warm particle theory', is simple, elegant and comprehensive. The warm particle theory says that insoluble,

cigarette smoke trigger the majority of diseases associated with smoking. Or, to put it more succinctly, cigarettes are radioactive.

The group of scientists who support the warm particle theory is admittedly small at the moment, but it includes some of the nation's leading authorities on the health effects of radiation, such as Dr. Edward P. Radford, professor of environmental epidemiology at the University of Pittsburgh Public Health School and chairman of the B.E.I.R. Committee (Biological Effects of Ionizing Radiation) of the prestigious National Academy of Sciences. In a recent interview, Radford said the warm particle theory provides '*far and away the most likely explanation of the production mechanism of the smoking-related diseases*'.

But Isn't Everything Radioactive?

Everything is slightly radioactive. Our soil, food, water and bodies all contain trace amounts of naturally occurring radioactive isotopes. Significantly, however, the vast majority of these background radioactive particles are *soluble in water*. When they enter the body, more than 90 per cent of which is water, they go into solution and are quickly excreted, resulting in no long-term internal build-up of radioactive sludge.

Tobacco, like everything else, contains trace elements of radioactivity, most of which is also soluble in water. But some of the radioactive particles in tobacco are *insoluble*. They don't wash out, but accumulate in the lungs and bombard delicate lung tissue with low-level alpha radiation, the same kind of radiation emitted by plutonium. While alpha particles outside the body are not particularly dangerous, inside the body especially in the lungs, they pose a serious health hazard. One one-millionth of a gram of plutonium in the lung, for example, virtually guarantees lung cancer within 20 years. The specific alpha-emitter in tobacco smoke is



polonium 210.

The 210S: Radon's Dangerous Daughters

The specific alpha emitter in tobacco smoke is polonium 210, a naturally occurring decay product — or 'daughter' — of radium 226, another natural radioisotope.

Back in 1964, B.E.I.R. Committee Chairman Radford was involved in cigarette/cancer research at Harvard University with Dr. Vilma Hunt, now a senior official of the Environmental Protection Agency. In the course of their research, they noticed something oddly intriguing about tobacco smoke. It contained small but significant amounts of polonium 210. They published this finding in *Science*, the nation's pre-eminent scientific journal. The following year, they collaborated with other researchers on a report published in the *New England Journal of Medicine*, the country's most prestigious medical journal, which showed significant concentrations of polonium 210 in smokers' bronchial tissue. That paper suggested that the cumulative alpha radiation dose from polonium 210 inhaled during years of smoking might be an important factor in the development of smokers' lung cancers.

Other scientists criticised this possibility because polonium 210, which has a radioactive half-life of only 138 days, is deposited in the lungs largely on particles soluble in water. Critics said it seemed unlikely that a relatively short-lived radioisotope that was routinely washed from the lungs could expose lung tissue to enough radiation to induce cancer.

Enter Dr. Edward Martell, a radiochemist with the National Center for Atmospheric Research in Boulder, Colorado, and author of more than 75 scientific research papers. In 1974 and 1975, he followed up the work of Radford and Hunt with two papers on the radioactivity of cigarette smoke, one

in *Nature*,³ the British equivalent of *Science*. Using funds provided by the National Science Foundation, whose research grants, he said, are less influenced by the tobacco interests than those of the Department of Health, Education and Welfare, the nation's largest supporter of health research, Martell took a fresh look at the work begun by Radford and Hunt. He discovered that the tiny leaf hairs on tobacco, called trichomes, attracted significant amounts of lead 210, another radioactive decay product of radium 226, and a close precursor daughter to polonium 210. Unlike the largely water-soluble cigarette smoke particles that carried polonium 210 into the lung, lead 210 in cigarette smoke was "highly concentrated in insoluble smoke particles." In other words, the lead 210 would not wash out of the lung. It would remain there and during its 22-year half-life, it would decay into alpha-emitting polonium 210. Martell asserted that the build-up of insoluble lead 210 particles in the lung would result in accumulations of decay-produced polonium 210 that would "continue to build up during the period of smoking."

- Martell then looked at the distribution of polonium 210 around smokers' bodies and found a rather startling match between polonium 210 accumulation sites and the sites of smokers' major illnesses. He summarised his own findings and those of many other researchers working in related areas in "Tobacco Radioactivity and Cancer in Smokers", published in *American Scientist*.⁴ In the paper, Martell asserted that:

- The unusually high levels of lead 210 found on tobacco trichomes and in tobacco smoke came from heavy applications of phosphate fertilizers used in commercial tobacco farming. These fertilizers contain significant quantities of radium 226, therefore, tobacco soils showed unusually high concentrations of its nine primary decay products. Of these decay daughters, lead 210 showed a "remarkable" affinity for tobacco trichomes.⁵

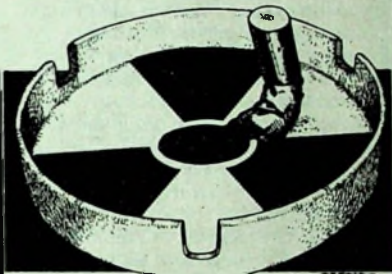
- When tobacco is smoked, the insoluble lead 210 particles accumulate in the lung and as they decay into polonium 210, the small cell populations around the polonium particles are subjected to alpha radiation, or "hits", hundreds of times greater than naturally occurring background radiation levels.

- If the polonium 210 particles were highly radioactive "hot" particles, they

would simply kill lung cells. They are not "hot", but "warm". Warm particles low-level radiation does kill some cells, but the crucial factor in their role in carcinogenesis is that they *injure* other lung cells by altering their genetic coding

If Martell's warm particle theory is correct, the disease consequences of smoking are caused by the radium 226 in the phosphate fertilizers used in tobacco farming. In a recent interview, Martell said that eliminating these fertilizers — that is, growing tobacco organically — would prevent the introduction of alpha emitters into smokers' bodies and result in safer cigarettes. He added that organically grown tobacco would not make cigarettes completely safe — carcinogenic tars would still be present in tobacco smoke. But Martell said he believes organic tobacco farming would reduce considerably smokers' risk of lung cancer and other illnesses.

If this regard, it is interesting to note that members of an Indian tribe in the Andes smoke tobacco regularly, yet almost never develop lung cancer. Their tobacco is organically grown.



Martell approached scientists at the Philip Morris Research Centre in Richmond Virginia and discussed his ideas about producing safer cigarettes.

"They weren't interested," he said.

Tobacco is a nutrient-hungry plant. Eliminating the fertilizer would reduce yields. American cigarette consumption may be slowly leveling off, but in the Third World, sales are booming as never before. Third World peoples see smoking as an emblem of national progress, and smoking American cigarettes is often considered a status symbol. The health risks of smoking are also less widely known.

The Philip Morris scientists told Martell 'no thanks' because they apparently prefer high tobacco crop yields with high lung cancer rates to lower yields with the possibility of substantially safer cigarettes.

while still leaving them able to reproduce. Over several cell generations, alpha hits sustained by successive daughters cells that already contain alpha-altered DNA become cancerous. Martell calls this a "multiple mutation process."⁷

- Unexpectedly large amounts of the

210s are found in smokers' lung tumors.

- Unexpectedly high levels of the 210s are also found in lymph nodes adjacent to the sites of smokers' secondary cancers. Some insoluble 210 particles are picked up by the lymph system and circulated around the body, collecting in lymph nodes and irradiating nearby organs. Smokers' secondary cancers "almost invariably occur at sites immediately adjoining lymph nodes with visible accumulations of insoluble particles and measurable radioactivity," for example, the pancreas.

- Finally, the fatty arterial deposits that characterise atherosclerosis also show "anomalously high concentrations of alpha activity," which suggests that "the high incidence of early coronaries among cigarette smokers may be explained by the accumulation of insoluble radioactive smoke particles at the plaque sites."

What To Do With a Hot Potato

Martell's papers were greeted with a thundering silence when they were published five years ago.

'The tobacco industry couldn't disprove anything I said', he recalled in a recent interview, 'so their scientists simply ignored the papers and hoped no one else would pursue my work'.

No one did, not even the non-tobacco-affiliated scientists studying tobacco-related illnesses. *'You have to remember', Martell said, 'that the entire field of low-level radiation and health is still pretty new and very controversial. Back in 1974 and 1975, it was almost unheard of, especially by cigarette cancer researchers, all of whom were studying the many chemical carcinogens in tobacco smoke. Most of them are still working on the chemistry of smoking today, not on the radio chemistry'.*

B.E.I.R. Committee Chairman Radford said, *'Martell hasn't proved the warm particle theory, but no one has refuted it, either. The warm particle theory is controversial, but it must be taken seriously'.*

Radford said he was not surprised that so little research has been funded to check Martell's findings.

'It's no accident', he stated, 'The tobacco lobby and the nuclear lobby are two of the biggest in Washington. They don't control research funding; let's just say they have disproportionate influence. The nuclear industry does not want the warm particle theory to gain credibility because it would prove once and for all that low-level radiation is very dangerous. That would mean big downward revisions in radiation exposure limits, revisions the nuclear industry cannot afford. And the

tobacco industry certainly doesn't want it shown that cigarettes are radioactive. It's a case of parallel interests for two major lobbies'.

Picking Up the Pieces

Martell's work sat largely unnoticed for several years. But with the emergence of the antinuclear movement, interest in warm particle theory began to heat up. Partly as a result of anti-nuclear activists' concern about the health effects of low-level radiation, Martell has received 1200 requests for reprints of his summary article, *Tobacco Radioactivity and Cancer in Smokers*, (*American Scientist*, vol.63, July-August 1975, pp. 404-412). In addition, smokers' lung burdens of lead 210 and polonium 210 are slowly beginning to creep into public health estimates of Americans' overall radiation exposure.

The B.E.I.R. Committee, which contains several pro-nuclear scientists, has yet to pass judgement on the warm particle theory, but Radford remains firm in his belief that it provides the best explanation of the disease consequences of smoking. 'I expect', he said, 'that in the next few years we'll see growing interest in the warm particle theory. It's an idea whose time appears to be arriving'.

Pass the word: cigarettes are radioactive.

Michael Castleman

Reprinted from *Medical Self-Care*, a quarterly journal for 'access to health tools', \$20 a year from MSC, PO Box 717, Inverness, CA 94937, USA. Michael Castleman is the author of *Problem Free Lovemaking: For Men and the Women Who Love Them* (Simon & Schuster).

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- 2 Little, et. al. "Distribution of Polonium in Pulmonary Tissues of Cigarette Smokers," *New England Journal of Medicine*, 1965, volume 273, pages 1343-1351.
- 3 Martell, "Radioactivity of Tobacco Trichomes and Insoluble Cigarette Smoke Particles," *Nature*, 1974, volume 249, pages 215-217.
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- 6 Ibid.
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Wood is a renewable fuel. And wood fires are bright and cosy. But most wood stoves are inconvenient to use and maintain. They're inefficient, too, which means the needless chopping of trees for firewood. A new 'breakthrough' in wood stove design could solve all these problems, as Mike Talbot reports.

Firey Furnace

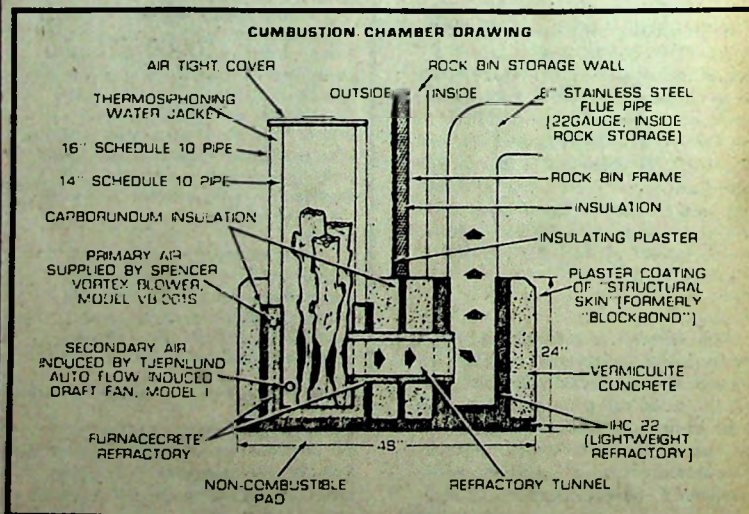
THE KEY to this woodburning system is the combustion chamber. Referring to the diagrams you will see that the combustion and the flow of the flue gases takes place in refractory chambers. Refractory cements (these are castable-type refractories) can withstand high heat and can contain the heat better than steel. Ideally we would use refractories that are lowest in density but highest in insulating value. However, these same refractories are lowest in strength. As a compromise, we have a heavy duty refractory for the chambers with the most abrasion (Furnacrete Coarse) and a light weight, insulating refractory for the rest (IRC 22). These chambers were cast in forms made from one-foot lengths of round ducts.

Sufficient oxygen for combustion is provided through two sources. Secondary air is pulled through a two-inch black iron pipe (leading into the primary combustion chamber) by the induced draft fan located at the

the combustion chamber through a one-inch black iron pipe. This pipe is cast into the refractory chamber with enough of the side exposed to allow for ten or eleven quarter-inch holes drilled one-half inch on centre. The turbulence provided by the forced draft fan insures proper mixing with the pyrolysis gases to attain complete combustion.

The Water Jacket

One major innovation (perhaps the most important development in wood burning technology since the air-tight stove) is the water jacket. The idea comes from the excellent research by Dr. Richard Hill of the University of Maine in Orono. In fact his work provides the core of our combustion chamber design. His design involves a hot water heat exchanger with hot water storage, while our design utilizes the stainless steel flue as a heat exchanger within a rock bin storage. The water jacket is



far end of the stainless steel flue pipe. Primary air is provided by the forced draft fan which blows into

the same in both designs. The wood is loaded through the water jacket. Water flows through the water

jacket by gravity thermosiphoning, moves through 1-1/2 inch black iron pipes and then goes into a heat exchanging steel tank within the rock bin storage. This flow of water keeps the wood within the water jacket below ignition temperature. Thus only the wood below the water

Overall this is the major problem in woodburning.

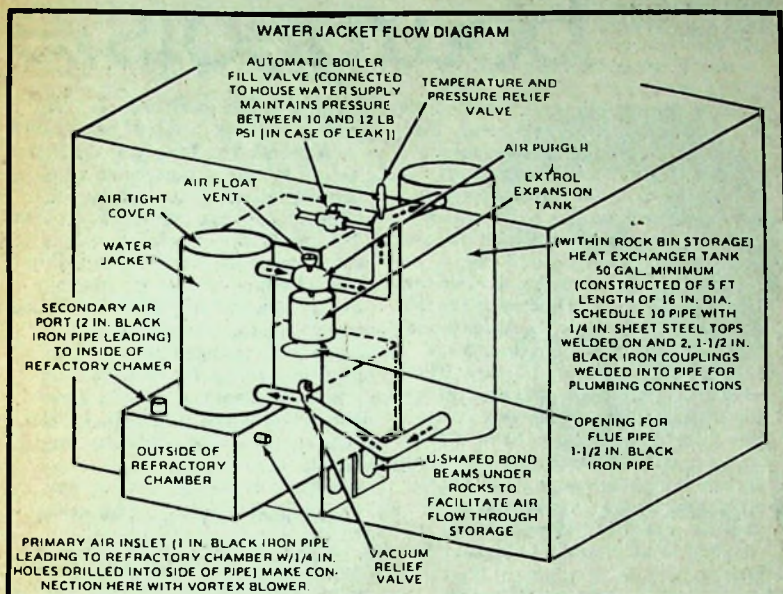
Designing Principles

Our original design involved refractory combustion chambers, forced and induced draft fans, etc. With the

burning or releasing those gases. Therefore, only the 'bottom' of the wood burns, that is the wood that is actually in the refractory chamber. As this portion burns and other portions drop into the combustion chamber, additional quantities of the pyrolysis gases are released. The net result is that portions of the wood are in different stages of combustion simultaneously. Now the fuel curve looks more like a straight line (indicating a constant amount of fuel). Carburetion becomes possible, resulting in very high efficiency without any creosote formation—and that goes just as much for pine as for hardwoods!

You will notice in the drawings that the combustion chamber is built into the rock bin storage. The flue pipe loops once through the rock storage, releasing the heat into the storage. A circulating fan within the rock storage helps spread the heat throughout the rock storage. That is not to say stratification is eliminated. The hot air is eventually drawn off the top of the storage so stratification is not actually a problem. We want the hottest air to come to the top. The house central heating duct-work is tied into the rock storage in a manner similar to that used in solar rock storages.

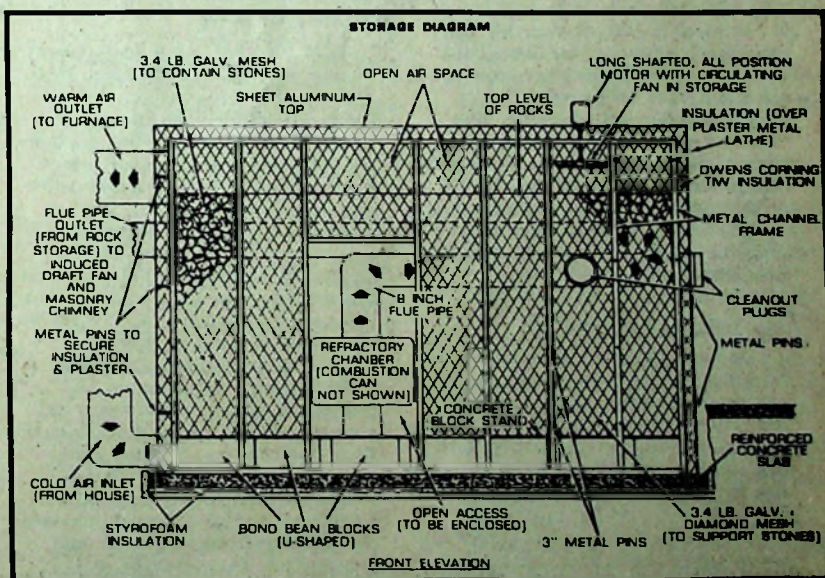
Mike Talbot



jacket (within the refractory chamber) actually burns. As this section burns away the unburned wood above drops into the chamber to be burned.

Wood Burning Chemistry

The chemistry of wood burning is quite complex and involves not just one fuel (as in coal or oil) but many. Fifty percent of the available BTU's (British Thermal Units) in wood is stored in the solid 'char'. This fuel remains stationary and all wood burning devices adequately burn off this fuel. The other fifty percent of the available BTU's is stored in a group of hydrocarbon gases known as pyrolysis gases. These gases are generated from heating wood and have ignition temperatures ranging between 725°F (methanol) and 1128°F (carbon monoxide). Ordinary wood stoves not only fail to operate within this temperature range but the gases are released over a short period of time which makes the 'fuel curve' vary widely over the total burning cycle. This makes carburetion (the proper air/fuel mixture) impossible to attain at the highest efficiencies. As much of these gases are vented to the chimney, there are three major results: low efficiency, pollution of the atmosphere and chimney condensation (creosote).



storage capability we could burn the wood hot enough with sufficient oxygen to volatilize most of the fuel but proper carburetion was still impossible because the amount of fuel varied so dramatically. By introducing Hill's water jacket we can now keep the upper portion of the wood from

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Brainwashing for the bourgeoisie

Erhard Seminar Training (EST) may or may not bring flashes of 'enlightenment' to its 'graduates'. But its methods have the effect of conditioning people to accept totalitarianism, as Jean Freer has discovered.

ONCE THERE WAS a saying in the East that went: 'When iron birds fly, enlightenment will come to the West'. Air travel has facilitated the exchange of ideas between distant cultures, and the cultural exchange programme that enables table tennis teams to travel to other lands is no doubt a good thing. But such superficial contact discourages the in-depth exploration of a previous age and gives great impetus to eclecticism. Schools of thought and practice consisting of components from a variety of sources have multiplied.

One such 'path to enlightenment' is est—short for Erhard seminar trainings, Est is based in San Francisco, California and recently expanded into Europe and Asia, with an office in Bombay. Est can indeed lead to increased self-awareness and one can experience moments of heightened perception which can be termed enlightenment.

It is not my intention to impugn the Est founder, Werner Erhard, his ethics or his intentions. Many people feel that Erhard is the messenger of enlightenment and they know that 'Werner loves them'. But in order to 'get it' through est, one must accept the est structure and the est beliefs as practiced. And this acceptance prepares people to accept the pseudo-liberal totalitarianism that is rapidly gaining strength at this time.

No Talking in Class

Once you agree to 'allow yourself to have the training', you agree to abide by certain rules. Although est is about understanding and learning to overcome our obstacles in communicating with one another, 'no talking' is an est ground rule by which all trainees agree to abide. This means you do not talk to the people you are sitting with: in fact, all conversation ceases as you enter the training room. You are told which seat to take by est graduate assistants, whose manner reminds you that you have agreed to obey. Practicing submission to belligerence is an important social conditioning experience.

Another agreement is to be on time. Should you be late, an assistant reminds you that you made an agreement, to ascertain if you still wish to abide by

your agreement and remain in the training. The assistant may even imply that you may not be a 'big enough person' to handle this. Meanwhile precious minutes go by as the training progresses and no one will be able to fill you in on what you have missed until the next break, which is four hours away.

It is possible, of course, to leave the training, and the trainer spends the first day inviting you to do so. At least one person always does leave, and this is seen to be 'part of their training'. Those who remain feel fused into a group by the action of the one who refused to join them. This feeling of being individually important while at the same time remembering that one is an infinitely replaceable part (a 'trainee'), is an essential aspect of the personality required to adapt easily to totalitarianism.

Rigid Hierarchy

All est workers are representatives of Werner. All est personnel have, for the purpose of the training, submerged their own personalities into the est type — powerful, demanding, certain and rigid. This rigidity results partly from the hierarchical structure which requires all ideas to be checked by Werner before they are implemented. As everyone is acting in his name. Despite this, there is sufficient opportunism in the est elan, a basic interest in survival as a prime goal, to make it responsive to demands from 'the people'. When I attended my post-training session in London in 1977 a graduate suggested organising coffee evenings and the trainer shouted back: 'No I don't support blowing smoke rings in each other's ears. What you should do is work through your local est office'. And no office will forward post to graduates trying to contact one another. Yet eventually in 1979 I received a card inviting me to an est coffee evening in rural Wiltshire; and the monthly est journal, the *Graduate Review*, now urges you to volunteer to have an est coffee evening in your home.

Every trainer says 'I only play games I've already won'. The 'game theory' view of life makes the seriousness of est acceptable to those whose bias is

rationality and skepticism. It also enables trainees to accept being called 'an asshole'. You have 'got' the first part of the est message when you accept/realise for yourself that in 'dogshit' language you are 'an asshole'. This revelation is obviously true in some sphere for everyone. But while it is refreshing to have the freedom to use 'obscene' words, the continued use of language called 'dog shit' contributes to breaking down our psychic barriers. The fact that the trainer does not use a microphone but shouts at you for the four and a half day training also adds to this effect.

Overcoming Psychic Defences

The trainer and the est assistants who flash up and down the aisles with mikes never seem to tire. The hours are long, from early morning to very late at night, regulated by the well-known est guarantee of 'maximum of one food break per day with three 'pee breaks' at four hour intervals'. The purpose of this is to help people see how they are governed ('at effect') by their habits rather than in control ('at cause') about their actions. You also agree to abstain from mind altering drugs (except coffee, cigarettes, soft drinks and sugar) during the training and to refrain from the practice of any usual discipline. The ostensible purpose of this is to enable you to see what is est and what isn't. But it also enables est to act on you during a period of reduced psychic defence due to the withdrawal one experiences from, say, suspending a meditation practice. Moreover, a well-known way to influence people is to radically disrupt the pattern of their daily lives.

To help the trainees cope with the pace, the programme is varied and adrenalin stimulants are provided. Each person, when acknowledged by the trainer to stand and be handed a microphone, unfolds their personal story of awareness, often being moved to tears. The catharsis of the crying should not be considered insignificant; for many who 'take est' this display of emotion is their first in many a long year. Its impact on others in that closed environment can be, and often is, electric.

The other trainees acknowledge this sharing by applause. Receiving applause is something we all seem to long for in this life and it is provided as a fringe benefit for 'keeping your agreements'.

I had an interesting encounter when, subsequent to my training, I went to supper with an est enthusiast—a graduate, of course—and several non-graduates. We were all old school friends and my visit to the area had brought us together. After supper I asked 'There's a lot of scientology in est, isn't there?' 'Yes', answered the enthusiast and was about to expand on this when one of the others said 'What's Scientology?' At this the zealot refused to say anything further and when I tried to return to the subject later, told me I was 'blowing it'.

Upper-class Scientology

I believe it is the elements of scientology and 'witnessing' that makes est so popular. Most of its followers are those who avoid scientology and revivalist religions such as Baptism and Holy Rollers because they see those movements as too working class. By charging high fees and meeting in middle-to-upper echelon hotels, est gives a veneer of respectability to these emotionally intense phenomena which middle class people seem to need before they can participate. By demanding no talking and allowing no touching, each individual is enabled to feel part of a group without in fact having any personal interaction with the others. This is facilitated by the relationship to the trainer and by fostering the notion that we are all the same. Trainers quite obviously differentiate in their treatment of and attitudes towards each trainee. Trainees are given intense emotional stimulation while being physically inviolable, allowing them to retain their illusion of personal dignity in the midst of such degradation.

I believe est succeeds because it appeals to the repressed irrationality of self-defined rationalists and because it constructs a mechanistic order in the void left by the nihilism and skepticism of so many 20th century Westerners.

Est is pervaded with the work ethic. The more Werner-like you are, the more demanding. Est graduates feel somehow more important than non-graduates, or unconverted heathens. It is expected that anyone becoming involved with est will speed up their own lives to keep pace. This stress on speed is accompanied by an over-emphasis on efficiency. There is a definite feeling that only the 'best' can keep up, and those who collapse are somehow inferior and therefore unworthy of real concern. Something

akin to a 'super race' runs the est organisation.

Law 'n Order Propaganda

Each 'process', or est in-training exercise, begins with the total relaxation familiar to many yoga practitioners. The trainer then reads a statement jokingly referred to by many trainees as 'the brain-washing propaganda'. It includes: 'There is beauty in order. I know and it is all



right for me to know and to manifest this'. Is this evidence that est is a refuge for the law 'n' order contingent, now wearing the guise of enlightened philosophers? Est seems to help those with unexamined lives to 'come out', to be themselves; but it does not seem to teach awareness of one's bigotry towards others, nor of the ways in which group pressure can be applied.

Part of Werner's philosophy is that we are all 'coming from' or existing in a state of, love, that everyone values life, and that a state of war is bad. But the medium is the message, and est is primarily a head trip with little physical interaction. The words are good but the behaviour is at odds with all we associate with love, particularly in that all social interaction must be channelled via the trainer. This works to keep people apart, unable to receive real love and comfort from one another and getting only the abstract love of Werner through his trainer/emissaries—and even then only if you believe it is happening, not because it is real in your experience.

Est uses gravity as an example of 'what is'—it believes in a verification of reality based on the physical world. As est children are taught: 'The ultimate test for reality is physicalness'.¹ I have my doubts about this view of reality, and wonder what occultists and others would make of it. Est

reminds you that if you fly in the face of 'what is' in the physical or social world you will be served with the consequences. One est goal is to make you more effective, able to live without 'efforting', and in achieving this you give up resistance and accept the est version of 'what is' in the social world.

This constructed reality 'solves' very neatly some of the difficulties we are facing in the new age. Over-crowding, for example, can be dealt with through regimentation, one channel communication and passive absorption of information. Est is, as it is named, a seminar training programme and those who complete it are graduates. Est meetings take place in the sterile and impersonal environment of hotel function rooms. People sit in rows of chairs facing a stage where an elevated director's chair is placed next to a podium. The language, too, reflects this order. Simple slogans like 'I've got it' 'That's OK' 'Great' 'I'm dogsit you're an asshole' are generalisations which actually limit linguistic meaning. They restrict our ability to think about ideas and ultimately limit our understanding.

Kinder, Kirche and Creche

But perhaps the most frightening aspect of est is its adherence to the infamous philosophy of 'kinder, kirche, and creche' as relates to women. At the end of each training, the trainer's wife (and children) are introduced to the group. The wife is praised for her devotion in 'handling all the physical aspects of the home', especially the children, and any travel arrangements. This introduction is often accompanied by a story of how she once had a budding career but now considers herself one of the est staff. This is of course the usual delusion—she is unpaid and it is in fact her husband who is on the est staff. Although there was, at the time I took my training, one woman trainer, I did not see her introduce her husband in a similar way. In any case the aggressive stance of est sits uneasily on her, and highlights the more aggressive aspects of est 'enlightenment'.

But Werner loves you and he knows that you love him.² If you are an est graduate you have contributed to changing the world. So Erhard thanks you for taking the est training. Is it a bad thing, if it makes people, even if it is only some people, happy? How can love be dangerous?

Jean Freer

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Property, in Proudhon's view, is theft. But in the view of those almost-forgotten reformers, the Distributists, Property is simply Badly-Distributed. Mark Pedlar believes that these ideas of yesteryear could have some relevance today.

Past Propertarians

DISTRIBUTISM, a precursor of the present 'back to the land' movement, gave rise to the Distributist League, which lasted from 1926 to 1963 and established two agricultural settlements at Langenhoe in Essex and Laxton in Northamptonshire.

Distributism was alien to the general trend of the times and failed as a practical movement. But its principles deserve re-examination in the light of today's circumstances.

The basis of Distributism as set forth by its best known proponent, Hilaire Belloc, is the belief that economic freedom can only be achieved in a state of widely distributed control of the Means of Production—which, in practice, means widely-distributed property in land and capital. Distributists believed that an economy consisting predominantly of small farmers, small retail traders and small workshops could be maintained in a well-divided and equitable condition so long as customs and laws safeguarding small property were strictly upheld. Otherwise, well-distributed property would inevitably, through the action of unchecked competition, become less and less well-distributed and ultimately accumulate in the hands of a

comparatively small number. Distributists did not consider the rise of Capitalism out of small property to have been an inevitable historical process. English history showed that social institutions, such as guilds, had safeguarded well-divided property until they were deliberately broken down. To Distributists, the restoration of small property was possible, but could only be successful if accompanied by regulations making for its preservation.

What was considered inevitable by Distributists was that State Socialism would be born as the intellectual fruit of Capitalism. It would, they thought, be seen as logical that property already in the possession of a few should finally become amassed in a single hand. The idea of State ownership itself was based on the illusion that an individual could experience ownership of something over which he or she had no personal control. Capital and State Socialism both denied economic freedom because both prevented the mass of people from using small property to their own ends. But Distributism, by restoring well-divided property, would allow economic freedom to co-exist with a satisfactory production and distribution of material

Hilaire Belloc
goods.

There would not be *equal* production and distribution, however. Distributism did not represent an ideal solution or offer the chance of perfection. It was not a recipe for egalitarianism. In a Distributive State there would be some comparatively poor and some comparatively rich, although the spread of wealth would be much more even than in a Capitalist economy. Small, diverse private property was consonant with human nature because it allowed the individual to impress his or her free will on the environment in the act of work. Imposed uniformity, on the other hand, denied economic freedom and human free will. Small property was also compatible with social justice so long as it was institutionalised and carefully maintained, as had been the case in the past.

Distributism did not dictate that the *whole* economy should be divided without exception into small, privately owned units; but ownership of this sort would be the determining feature of a Distributive State. All unnecessarily large units of production, distribution and exchange would be broken up into smaller units. The criterion of small size would be the point at which, in a

the ADVENTURES of atwitch



particular branch of industry, a human relationship could exist between the worker and the whole concern. Ownership in industry above the level of the independent individual or small employer of labour, would be by shares (properly divided and responsibly controlled), or by worker co-operatives, preferably the latter. Only 'natural monopolies' would be kept in State ownership.

In common with Guild Socialists such as GDH Cole, the concern of Distributists in industry was to encourage craftsmanship and to maximise the control of individuals and small groups over their own work, within organisations of producers which regulated the industry or service in the interests of the whole community. To this end, both groups advocated a restoration of the medieval guild system along modern lines. Each guild would be composed of all the workers in the branch of industry or service. It would be largely autonomous and operate within a larger system of guilds representing the different interests in society. In some cases, existing trade unions (like the NMR and NUM) might be turned into guilds, but Distributists saw the establishment of guilds in craft and retail trades as a greater priority, since here there was small property in danger of vanishing.

Under Distributism, worker co-operatives could be important components of industry but in agriculture well-divided private property would be the rule. This would require the creation of a sizeable body of citizens working on land of their own, that is, a free peasantry. This was one of the main aims of Distributism—and also the one

seeming to have least chance of attainment. For, in Belloc's words, 'England is the typical example of a country in which the desire for land, and the sense of ownership in it, has, for the mass of the people, fallen to its lowest'.

Distributism carried with it an historical awareness of what the free peasant stood for—generally, political stability and liberty. The economic changes that had followed the Reformation had left substantial peasantries in countries like Belgium and France, but Britain's had been all but swallowed up by the big landowners. So townsfolk would have to be grafted slowly onto the surviving peasantry, and many changes in taxation and property law would have to be made before a peasantry could prosper. What could not be established by law, however, was the state of *mind* which desired small property. Without it, well-divided property could not be attained, in land or anything else.

Agriculture is the foundational layer of society in that land use and ownership shape the character of the whole State. So it is important to consider the case for Distributive agriculture today. The original argument for economic freedom is stronger than ever before, with land increasingly being monopolised by business and financial institutions. Moreover, there is now a strong social case for land re-distribution, in view of the increasing permanent unemployment in industry. And the ecological reasons for land re-distribution are today more evident than they were to Distributists. These are that British agriculture is neither sustainable nor productive in terms of yield per acre; sustainability and self-sufficiency are

possible on the available land if intensive, organic husbandry on small acreages is adopted, and well-divided private holdings are the necessary condition to provide farmers with the incentive to manage the land for future generations and the family smallholding provides for intensive personal contact with the soil, necessary, for example, in the use of manure. Although Capitalist agriculture is necessarily short sighted and self-destructive, Collectivisation is not the answer, as events in Russia and, more recently, in Portugal have shown. Distributive agriculture can surpass both in productiveness and is the handmaid of both ecological stability and economic freedom.

Radicals of today have long realised that Capitalism and State Socialism are not the only alternatives. Many also realise that no good and human system can be produced mechanically but must await a spiritual change in society. Although no change in the relations of production alone can bring about the non-violent revolution, its supporters should consider whether Distributism represents a practical framework for the deeper changes.

Mark Pedlar

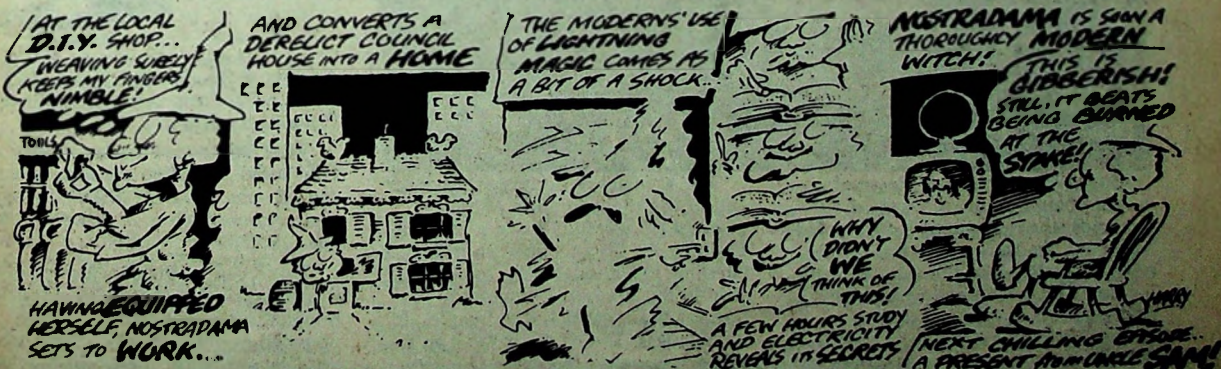
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[PART 2] the ORIGIN of ATWitch



REVIEWS

RURAL GENOCIDE

The Theft of the Countryside by Marion Shoard, Temple Smith 1980, 269 pp, 22 pltes. £4.95.

THE FARMER is traditionally thought of as the most responsible custodian of the countryside but, as modern agriculture steadily impoverishes the landscape and wildlife of Britain that view is changing. Much has been written about the encroachment of towns on the countryside but Marion Shoard points a well researched and carefully argued finger of accusation at the farming industry.

She argues that lavish government grants, guaranteed prices and exemption from the planning laws have enabled farmers to destroy the historical, scientific and aesthetic wealth of the countryside unhindered by public involvement and with the active support of every post-war Government.

have led even the Nature Conservancy Council (NCC), not given to overstatement, to say that if modern practices were extended to all farms we would lose eighty per cent of birds and ninety five per cent of butterflies. Already some species such as the Large Blue butterfly and Corncrake have been driven to extinction or to tiny colonies in nature reserves by modern agriculture.

Ms Shoard offers a first rate analysis of the system of price supports and capital grants which encourage farmers to produce unwanted food at public expense whilst lining their own pockets and irreparably damaging landscape and wildlife. It is worth reading if only for its simple and lucid description of the baffling Common Agricultural Policy, and it is refreshing to see the sacred cow of national self-sufficiency exposed as economic and political nonsense.

They can only offer compensation for leaving it alone or offer to buy the land. The farmer need not sell or accept any agreement and even if he does the NCC has too little money to make many such deals. At the end of the day there must be a system whereby planning and conservation authorities can prevent a farmer damaging a natural feature without compensation and with punitive measures for enforcement.

Ms Shoard's main conclusion is that farming must be brought within the Town and Country planning system. This would certainly offer protection for the wider countryside but planning is not a rational tool for allocating resources, it is an intensely political weapon which would be wielded in favour of the established order. Public enquiries would air the issues but one foresees overstretched planning authorities unwilling to tackle the problems, and a string of Government decisions in favour of arming and the national interest. The case is powerful but not totally convincing.

The author shows more interest in landscape than in scientific conservation and the quotations from English pastoral poets cloy a little, but overall this is not a sentimental book. It is a hard edged analysis and attack on agricultural and conservation policy with an optimistic view of future change wrought by countryside pressure groups. Essential reading.

Alan Farleigh

NALGO

Energy: A Planned Policy NALGO
108 pp. free from NALGO, 1 Mabledon Place, London WC1.

'NALGO can see no reason why the UK should not adopt the same aim as the US—namely, that 20% of our energy should come from solar power by the year 2000'.

This is one of the conclusions of the revised edition of NALGO's excellent booklet, *Energy: a planned policy*, prepared by their Energy Policy Advisory Committee for the Union's 1980 Annual Conference. Like the original



The evidence for such destruction is overwhelming: the drainage of wetlands, the removal of broad-leaved woodland, hedgerow removal (4,500 miles annually since the war), ploughing up of moorland and wholesale afforestation of tracts of upland country. Not to mention the total reliance on pesticides, mineral fertilizers and mechanization. Such methods

The agencies responsible for conservation and the legislation at their disposal are woefully inadequate. The Countryside Commission can influence planning in National Parks but outside, even in the Areas of Outstanding Natural Beauty which it designates, it is powerless. The NCC can label an area a Site of Special Scientific Interest but cannot prevent a farmer destroying it.

1978 edition, this booklet is packed with information on all aspects of the energy scene. While not an anti-nuclear tract—NALGO critically supports a limited nuclear programme in line with the current TUC policy—it raises all the problems in a clear way and is particularly sound about the Fast Breeder.

NALGO's current position is that *'it supports the continued use of nuclear power for the generation of electricity, but believes that before any major expansion of the nuclear energy programme, there should be a full and informed public debate'*. (1978 and 1980 Reports.)

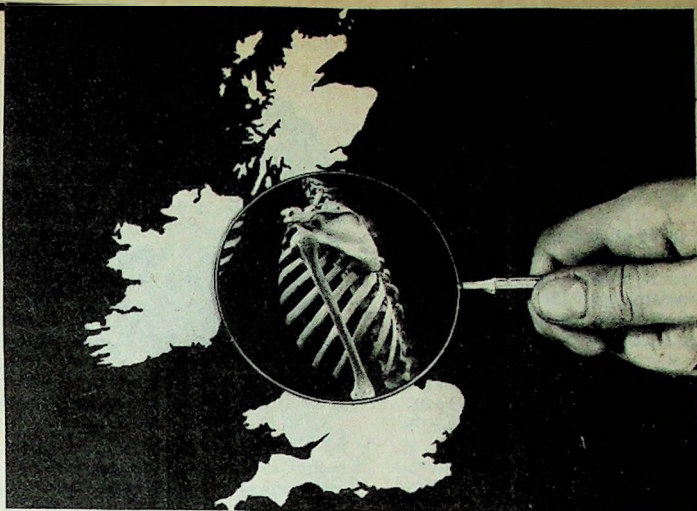
The debate on nuclear *within* NALGO is, however, far from resolved. Two rival motions, one strongly pro—and one strongly anti—were passed at the 1978 Annual Conference. The first called for 'the development of nuclear fission using European technology, in order to meet the Community's energy needs by the year 2000 providing adequate safety provisions are enforced', while the second called for the Government to 'curtail the nuclear energy development programme until such time as the resultant waste can be disposed of safely and environmental interests safeguarded'.

As for the nuclear programme announced by the Tory government in December 1979, NALGO has expressed 'reservations' about the safety of the PWR, the need for more capacity, and points out that we have ample fossil fuel reserves. It argues that Tory programme is 'premature' and believes that 'the Government does not need to be rushed into taking decisions of such magnitude prior to the holding of a full public inquiry'.

In many ways it is a pity that NALGO could not have used more up to date, long term estimates of potential 'renewable' contributions—like those in the Department of Energy's 1979 *Energy Paper 39*, which amongst other things, indicate that the ultimate potential of solar, space and water heating alone could be as much as 100 mtce, while solar biofuels and crops might contribute up to 60 mtce. Taken alongside their estimates for wind (land-based and offshore) of up to 35 mtce, wave 10-40 mtce, tidal 4-10 mtce (Severn) plus 2-3 from other sites, and 'several tens of mtce' from geothermal, it seems likely that we could ultimately meet at least half our primary energy needs from renewables.

Maybe we can look forward to a third edition of NALGO's report: one which takes these statistics into account, and which finally comes off the fence on nuclear.

Dave Elliott



From Peter Kennard's exhibition at the Half Moon Photography Workshop (until Nov 28)

Nostalgic wind

Wind Power Principles J. Calvert. Chas. Griffin & Co. £6.20.

Dr. Calvert is well known in the academic world and also in the world of wind energy for his research into the operation of Cretan windmills of the type seen on the plain of Lassithi, pumping water. Until Sweeney, from Princeton University in New York, went there early in the 1970's, he was probably alone in the world pronouncing the virtues of the sailing windmill. Yet the chapter in the book covers barely five pages and although filled with topical tips on the subject, doesn't really get down to the fundamental problems of operating one of these machines and their solution.

So the book must be judged in its broader terms on how it covers all the various other aspects of wind power to be classified as a book on windpower principles. Looked at in this way, it falls down on fairly major points. One of the foremost is the fact that it is so out of date: the book was first published in '79 and yet could quite easily have been written in '69 because it contains none of the great advances that have been achieved in the last ten years. For example the section on Vertical Axis wind machines only goes as far as the mid-60's and doesn't mention at all machines like Peter Musgrove's Variable Geometry and the Variable Pitch designs.

There is also an undeclared tendency to run down high speed machines. At various occasions, they are described as distressingly noisy, and emphasis is given to vibrational problems and the possibility of approaching the speed of sound. Meanwhile sailmill low speed machines generally get a good write-up all the way through. This tendency to favour, perhaps unconsciously, the Cretan-type low speed sailmill is accentuated by the fact that the pilot plant for experimental work is a simple design of one of this type.

Still enough of the grousing. Any book which comes out which is going to broaden knowledge on wind engineering, must be a good thing and Dr. Calvert is certainly enthusiastic; subtly hidden within the text, are such statements as *'the justification for windpower in a society such as ours, is to save fuel energy and thus to make the world a pleasanter place to live in, also to keep alive skills and attitudes which may yet be of value'*. Certainly a student using this book as a text for a course or a short course, would get a good grounding in the history of the use of wind energy. It is unfortunate, however, that the book is not a more up-to-date and that the references at the end don't at least introduce students to some of the more modern magazines on the subject, including *Undercurrents*, which would enable them to find out what was happening in 1980 rather than in 1960. People wanting to actually build machines rather than to look at the theory would do much much better getting a book like Jack Parke's *Windpower Systems for Experimenters* or N.A.A.'s *Windworker*. (plug). Geoff Watson

GAIA

Gaia, a New Look at Life on Earth,
J.E. Lovelock. Oxford University Press,
£4.95.

DOES OUR planet live? This is the question posed by the Gaia hypothesis.

J.E. Lovelock, a specialist in gas chromatography and visiting professor in the Department of Cybernetics at Reading University, concludes tentatively that it does.

He asks how it is that there have been no substantial interruptions in the 3.5-aeon history of life on Earth, despite gross fluctuations in solar outputs, land surface properties and atmosphere properties, the extremes of which would certainly have removed all life from the planet.

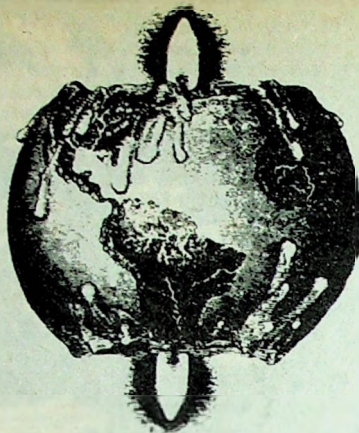
The answer, he suggests, lies in the activities of Gaia. 'We have... defined Gaia as a complex entity involving the Earth's biosphere, atmosphere, oceans and soil, the totality constituting a feedback or cybernetic system which seeks an optimal physical and chemical environment for life on this planet'. Gaia is responsible for homeostasis, the maintenance of relatively constant conditions by active control.

Lovelock believes that the homeostatic devices of Gaia are of such strength that 'if half of all the nuclear weapons in the world's arsenals, about 10,000 megatons, were used in a nuclear war the effects... although... horrific for the participants and their allies would not be the global devastation so often portrayed. Certainly it would not much disturb Gaia.'

Where then are the vital organs of Gaia? With what must we meddle to produce devastation of such magnitude as to perturb this sanguine Goddess?

'The algae of the sea and soil surface... in co-operation with the aerobic decomposers of the soil and sea-bed, together with anaerobic microflora in the great mud zones of the continental shelves, sea-bottom, marshes, and wetlands... still turn over half of the Earth's supply of carbon. The large animals, plants and seaweeds may have important specialist functions, but the greater part of Gaia's self-regulating activity would still be conducted by micro-organisms'.

It is thus to the sea areas between latitudes 45°N and 45°S that Lovelock points the warning finger of the considering scientist. In view of proposals for the large-scale farming of kelp and the enormous speed with which oil and gas extraction technology has colonised the continental shelves, Lovelock com-



ments: 'Knowing or perhaps even suspecting as much as we know now, it seems unwise to tamper with these regions... It may even be perilous'.

Having accepted that Gaia is a living system, can we go on to attribute intelligence to her? Lovelock asks whether this might be the human contribution: 'To what extent is our collective intelligence also a part of Gaia? Do we as a species constitute a Gaian nervous system and a brain which can consciously anticipate environmental changes?'

One of our unique capacities is for the ordering and storing of information in systems analogous to the genetic codes in living cells, but at rates of accumulation much faster than in the biological processes. Will it be this faculty which allows us to re-establish complete concordance with the creature on whose skin we creep about and, by so doing, to avert catastrophe?

Tony Crerar

Past Life

Reliving Past Lives—Helen Wambach
— Arrow Books £1.25. *Return to Reincarnation*.

A rather thin, sketchy book on a fascinating subject. The dramatic cover promises more than is actually delivered, although the occasional insights lift it out of the category of forgettable.

The author examines 1088 data sheets recording information provided by students of experiences whilst under hypnosis. The scenes recorded are stated by the students to have occurred at different times in history from 2000 BC to the 1900s and various contemporary details from these periods are cited that confirm

the apparent authenticity of the events.

Contrary to the claims advanced by the publishers, this book proves nothing. Only an individual can assess the truth of the theory. The use of statistics and logic to try and prove something that is by its nature outside statistics and logic is unfortunate.

Apart from a short section on modern myths, the information being discussed is not presented in any context; scientific, religious, philosophical or personal. Consequently an introductory readers could well be confused about what the book was actually doing, other than categorising individual mental experiences under hypnosis.

The author's approach to the human mind is rather naive. She assumes that because her students reveal facts and historical details that they could not have been aware of, necessarily proves the existence of a prior life. It is interesting to note that Carl Jung in his work with dreams came to quite different conclusions to those of the author when his patients revealed mythological information of which they had no previous knowledge. Rather than confirming the theory of re-incarnation, Jung considered these occurrences were indicative of what he called the 'collective unconscious'. See Jung's *Collected Works*. Volume 8. *The Structure and Dynamics of the Psyche* paragraphs 283-342.

Perhaps the author as a clinical psychologist could have explained further the effect on the students' lives of having experienced what they considered to be past lives, the relevance of this theory today for an increasingly anomic youth, the psychological reasons for renewal of interest in this subject and the value of such altered states of consciousness generally.

Overall the impression given by this book is that the author has taken too narrow an approach to what is a complex and wide-reaching field. It is a redundant volume since it adds nothing to the already immense amount of published information on the subject.

A reader whose interest has been aroused by this book would be better directed towards 'Death and After' by Annie Besant—The Theosophical Publishing House, and say Chapter 4 of 'Rosicrucian Cosmo-Conception' by Max Heindel—The Rosicrucian Fellowship.

Neil Dougall



A big bad book; or Cobblers

Human Scale Kirkpatrick Sale, Secker & Warburg, 558 pp. £5.95.

JACK (of beanstalk fame) is two feet tall and weighs 50 pounds; the giant is ten feet tall and proportionally broader: How much does *he* weigh? If you can see that the answer is about three tons rather than 60, you're a step ahead of Kirkpatrick Sale, whose neoschumacherite *Human Scale* offers this schoolboy howler in its opening chapter. Oh Fritz, what rubbish is published in thy name!

Though it's considered smartass elitism in some circles for a reviewer to nitpick about spelling, syntax, etc, I trust UC's board of censors won't mind my pointing out that the author of this pretentious tome on the problem of scale in human affairs can't count for toffee.

Nor is his natural history any better: a few pages further on he asserts, without any evidence at all, that it was their size that killed off the dinosaurs, ignoring the modern view that it was the catastrophic climatic changes caused by a meteorite striking the earth that ended their 100 million year reign. Rank speciesism, I call it, seeing as on current form we will barely have notched up our first million years ourselves before we blow up the planet. And if that meteorite had missed, we might still be tiny mouse-like creatures hiding in the corners from the tramp of mighty feet...

The moral is that the argument that small is beautiful is only an argument and not a dogma. It is, as Fritz stated quite clearly, a question of 'What is actually needed' and 'there is no single answer'. What we get here, however, is a contribution to the 'idolatry of smallness'. Size governs, says Sale, and for everything there is an optimum size, a sweeping generalisation that is either trivial or false, from which he deduces the obviously false corollary that 'beyond this optimal size *all* (my italic) elements of the system will be affected adversely'. If the world were that simple, there'd be no big systems for him to complain about!

Having stated his dogma, Sale goes out to look for evidence to confirm

it; none of your boring old scientific methods here. Even his logic is slippery: since big is bad, all badness comes from bigness, he implies, so all we have to do is look for examples of badness in modern life. So what we get is a Cook's tour of the problems of modern America, from government via business, architecture, food, energy, health, garbage, to education. All very depressing and quite unconvincing.



New Acupuncture Therapy for curing verbosity

When he turns to the positive alternatives, Sale does rather better: what he wants, of course, is the usual bag: steady state economics, local self-sufficiency, co-ops, etc. But even here he gets in a muddle about the Law of Diminishing Returns and seems to argue that to organise nine (yes, *nine*) people to make furniture is a task so complex that workplaces should be restricted to seven workers. Further on, he really gets out of his depth by claiming, as a general law, that combining separate states into a common market always impoverishes them. The truth, of course, is a lot more complicated and a lot more interesting: it depends on, *inter alia*, the balance of comparative advantages in different industries. How very much easier it is to stick to a simple dogma.

So why bother with *Human Scale* at all? Simply because it's an example of the growing practice of British publishers, rather than risking their money on a book that might tell us something useful about ourselves, of snapping up an American potboiler. All too obviously unread, and hyping it up, as Seckers have done with this twaddle, as an important and significant book. No wonder British publishing is going broke: the sooner the better, and then we'll be able to get such American rubbish as we want direct and dirt cheap from the source.

A big bad book; but not, I repeat, bad because it's big: bad in its own right.

Chris Hutton Squire

Earthtalk

Dowsing and Divining—Peter Underwood—Rider and Compay £5.95.

Anyone sceptical about the truth of dowsing and divining would be well advised to read this book and 'Alive' by Piers Paul Read—Pan Books £1.25, which mentions the efforts of an old water diviner who accurately located the Fairchild F-227 which crashed in the Andes on October 12th, 1972.

The author makes the important observation and even among the practitioners of these arts there are diverging viewpoints as to the significance of their talents and ethics of their use. Many dowsers (considering their sensitivity a gift from the earth) would take exception to the Mr Young referred to in the book, who demanded £200 per day for his dowsing services. Similarly the controversy around the 'Black Box', part of the apparatus for diagnosis of medical ailments used by radiesthetists, (essentially the application to medicine of the mechanics used in dowsing) attracts unfavourable attention to what is essentially an undeniably genuine and practical skill.

The book is profoundly detailed and well-researched including information about dowsers past and present, case histories of successful dowsing and divining, and more interestingly, the many theories, from magnetism to ley lines, advanced to explain HOW the skills work. The author has the honesty to admit there is no one 'true' answer to the question.

He refers to the famous research of Professor J.B. Rhine at Duke University which scientifically authenticates the existence of previously unknown forces, and makes a passing reference to a sixth sense, a latent human sensitivity waiting to be developed. He considers it is this area of the human psyche which could account for an ability with the dowsing rod, and even includes a chapter on how to acquire the skills described. Unfortunately this aspect of the study is not further developed.

The unqualified value of this book is that the author's enthusiasm for his art is infectious. You want to experiment, to see if it will really work. Insofar as you are instructed to be relaxed receptive and sensitive to your impressions whilst 'on duty' on the earth is to be encouraged in any event. If, in addition, the reader finds hidden treasure, an underground stream or the scourge of personal fatigue, then the experimentation with, and recognition of, hidden laws of nature/latent sides of oneself will have been doubly enriching.

Neil Dougall

Great G Struth

The Harmonious Circle: An exploration of the lives and work of G.I. Gurdjieff, P.D. Ouspensky and others. James Webb. Thames & Hudson, £10.

AT FIRST glance this looked like very heavy reading, only for the committed Gurdjieff fans. However, once immersed I found it fascinating reading. Gurdjieff's early life seems to be somewhat shrouded in mystery and speculation. As indeed are most of his teachings. He revelled in obscure allusions as to what the big L. LIFE was all about. His teachings are a cosmic hotch potch taken from the Kabbalah, Sufism (he often posed himself as a Sufi master) various occult traditions of both East and West. Combined with his rampant ego and his undoubted ability as an illusionist, it creates an exceedingly interesting biography.

Was he a Guru or a charlatan? Did he really spy for the Russians? I was left feeling that although I had gained a lot of information from this book I still didn't have an opinion about the 'real' man behind it. Gurdjieff's aim was to prod man's 'conscience' into wakefulness:



ILLUSTRATIONS FOR A TRADITIONAL RUSSIAN TALE THE ARCHER WHO WENT TO KNOW NOT WHERE TO FIND I KNOW NOT WHAT

'If a man whose entire inner world is composed of contradiction were suddenly to feel all these contradictions simultaneously within himself, if he were to feel that he loves everything he hates, hates everything he loves, lies when he tells the truth, tells the truth when he lies, and if he could feel the full horror of it all, this would be the state which is called 'conscience'. Tricky stuff! However, it's your cosmic cup of tea it published by Thames and Hudson. Hardback for a mere £10.

A humble three-brained being of the Planet Earth.

The Story of Ruth Morton Shatzman. G.P. Putnam (1980). 306pp. £6.95. (hardback).

UNDERCURRENTS readers who are interested in the paranormal might find this book an informative read. Having picked it up at a friend's I read it compulsively from cover to cover, unable to set it down. It's the story of a woman who sees apparitions, first of her father and then of other members of her family. The story is told by Morty Shatzman the psychotherapist she turned to for help when the persecutory apparitions of her father first appeared. Shatzman's approach is interesting. He doesn't assume that the apparitions are the product of a disturbed mind, projections of feelings and impulses that are unacceptable. From the outset he is prepared to entertain the possibility that the apparitions have some other reality. As his work with Ruth progresses they come to the conclusion that although the persecutory apparitions are to be related to her psychological state she is someone with an unusual creative ability. With Morty Shatzman's help she finds she is able to use this strange ability therapeutically and by the end of the book she is able to accept herself as someone with an unusual talent—even using her ability to create apparitions to provide herself with a companion to talk to in bored moments. The story of this transformation, with its returns via her apparitions to the traumatic experiences of her childhood, is a fascinating one. Morty Shatzman has reconstructed it vividly from notes and tape recordings taken at the time so that it reads like a very moving and gripping novel.

Rosemary Randall

Alien culture

The House on the Rock: Brian Cleeve: Watkins: 266pp. £2.70.

I KNOW most Undercurrents readers will look upon *The House on the Rock* as benign fiction—a man talking with God—what next? Yet you should read Cleeve's novels—full of such harsh reality that they made me feel sick. Whatever will the future bring? Read them and know that it will be much, much worse: as *this* book shows.

Cleeve asks many sympathetic questions on the plight of women: on

their hard lot in life. However I feel that the time has come for women to lift themselves above oppression. We are capable of being responsible for ourselves, of being joyful and resourceful as WOMEN. I know we are working within our own different limitations but each day we are free to be *light* instead of *heavy* (i.e. carrying our burdens easily, transforming them, instead of being borne down by them): free to stop the negative thoughts and feelings that can fill each minute of the day. So though I am touched by Cleeve's concern, the oppression is a myth we need to shatter. Right now just like that!

And in this country where supermarkets put up signs saying 'We sell fresh food daily' it is the women who are responsible (?) for the buying of food. It is one of the most important tasks of the day. God talks of special diets enabling people to see and hear on a different level—Cleeve himself has such a diet. He talks of foods being contaminated by poison, nuclear fall-out, insecticide, plums, berry fruits and rye being less so than others. What research is being done in this field? Does anyone out there know? Perhaps some women could form a Contaminated Food Research Group and let us know the results—quickly. (Not that I doubt Cleeve's God!).

The last issue of Undercurrents had a feature on a nuclear disaster at Kyshtym in Russia. If it is the same explosion, God says that it was people from an UFO who were responsible. That they have been taking tiny quantities of nuclear power since the 30's through individuals who help them.

Perhaps in *The House of the Rock* there is too much that is alien to the average reader. But this book is well worth going through to find the familiar—sex, nuclear power, the equality of women, dowsing, pyramids, auras, UFOs. And a tiny quantity of the alien might just rub off on that cynical Undercurrent shoulder.

Fiona Cantell

MALEfic charity

Field Directors Handbook, Oxfam. £10.

ONE of the largest and best known charities in Britain have made public their *Field Directors' Handbook*, which must be one of their weightiest publications ever—4 lbs of beautifully-printed sheets, in 52 different sections. The objective, according to the editor, is 'to summarise Oxfam's objectives and

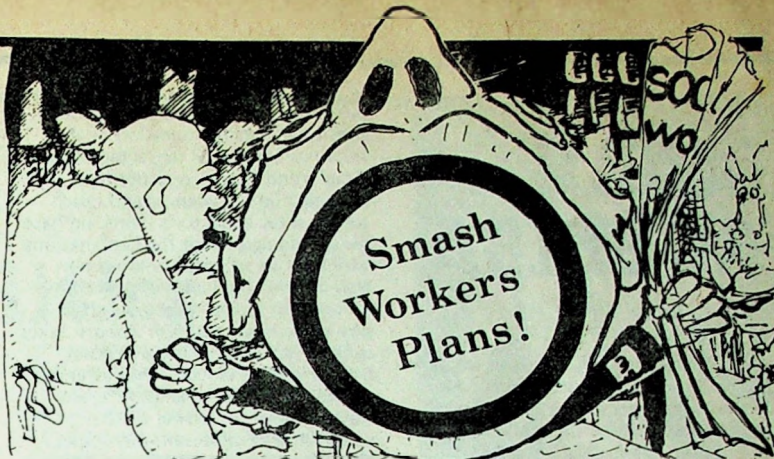
strategies... and to provide advice based on project experience'. The detailed index shows that the topics covered range from 'Abortion' to 'Youth Clubs', via 'Empathy' and 'Rats—see Vermin'. Oxfam is for Empathy and Youth Clubs, but against Abortion and Rats.

Oxfam started out under a slightly different name in 1942 'to relieve starvation in Nazi-occupied Europe, without interfering with the Allied blockade'. Its operations were suspended 2 years later by the Ministry for Economic Warfare, but resumed after the liberation of Europe; the organisation now owns £1½ million worth of property, has an annual income of over £8 million, and enjoys a high degree of public esteem. Hooray, then, for their courage in publishing such an intimate document and exposing for public criticism their basic philosophy and practice.

The trouble is that their 'philosophy' is so woolly and contradictory that it just doesn't stand up. Since the beginning, the organisation has been faced with the fact that human sympathy with starving people can, and often does, bring you into conflict with governments. Yet here they are, 40 years on, trying to kid us that humanitarian concern can exist and be expressed quite separately from any kind of political analysis and outside any political structure.

There is much more to be said about Oxfam: their rigid, hierarchical and male-dominated internal structure; the struggle for union recognition amongst the staff; and worst of all, the subtle racism of their 'education' programmes, which so often perpetuate the image of the Third World as full of starving black children who have no relation to us and our economic system other than the passive role of aid recipients. But let us finish on a positive note. The great achievement of Oxfam has undoubtedly been their operation in Kampuchea: not only in raising and channeling into that unhappy country £11 million of aid at a time when it was crucially needed, but for their political stand. For once they departed from their usual policy, and decided to accept the authority of the Heng Samrin government in Kampuchea in spite of the pressure from the American government not to do so. By taking this political stand they helped save many thousands of lives. If only they were more prepared to take a public stand on political issues in other parts of the world, particularly over South Africa!

Penny Cloutte



Workers' Power Not Nuclear Power
A Socialist Workers Party pamphlet by Mike Simons (Feb. 1980) 48 pages 50p.

THERE IS a dearth of good hard hitting agitational material on nuclear power—and this pamphlet fills the gap very well. It covers all the main issues—safety, security, trade union rights, uranium mining, transport, reprocessing storage etc.—in a well informed way, with only the occasional error on rhetorical excess. The worst bits are the two introductory pages of basic (garbled) nuclear physics. The best parts are its incisive review of energy policy over the past few decades. Remember the Drax B fiasco—when the Parsons shop stewards campaigned (successfully) for (coal fired) Drax to save their jobs? Remember how the industry and the government both said 'we won't need any new generating capacity for several years'. And now the Tories are pushing for one new nuke each year?!

The SWP presumably hope that the same sort of 'worker's power' that the Parsons Stewards brought to bear over Drax, will eventually bring about a halt to the nuclear programme. And yet they seem strangely unconcerned about developing 'alternatives'—much less campaigning for the development socially appropriate alternatives, along the lines pioneered by the Lucas Stewards. In fact the SWP is actively hostile to the idea of 'workers plans' which they write off as 'reformist'.

Down with Workers Plans!

For example, take a look at the critique of the Lucas campaign in the SWP's otherwise excellent New Technology pamphlet *'Is A Machine After Your Job?'* (second edition). Workers plans and 'alternatives' generally are seen as potentially disillusioning at best, divisive at worst—an alternative to class struggle and 'building the party'...

On the nuclear question the SWP seem to be arguing that 'the only alter-

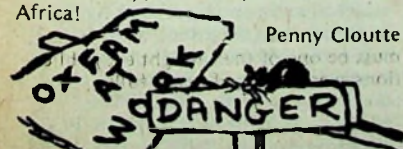
native to nuclear power is socialism'. Now in a sense this is true—but it's too general a statement. Fighting for the rational development of technology is part of the process of building socialism and class consciousness—practically and ideologically. 'Socialism' isn't something 'out there' to be arrived at... under the leadership of some elite.

Perhaps fortunately these issues do not surface noticeably in the 'Nuclear Power' pamphlet—apart from a few oblique references, for example to 'the politics of Nuclear Power' (which I edited) which is seen as 'a disappointment. Full of information on health and safety in the industry (tut, tut), trade union rights and (worse still) alternative sources of energy. 'All in all it's a reformist analysis supporting 'workers plans' and 'alternative economic strategy' (i.e. decentralisation etc.)' How reformist can you get!

In fact, these last two points aside, the SWP's pamphlet is very similar as far as I can see—recycling much of the material contained in the Pluto book and in parallel SERA publications. I don't object to this in the slightest—but let's be a little more careful about the distinction between 'reformist' and 'revolutionary'.

The SWP is evidently trying to be seen as the 'true revolutionary' party—with The Correct Line. Now while there are differences of approach (e.g. over the role of 'the party') as it happens the SWP's prescriptions for action on the nuclear issue (involvement of the grass roots of the unions) are more or less exactly what many of us in SERA have been patiently working away at for the last four years... with increasing success, and without succumbing unduly to reformism!

So well done SWP, this is an excellent and useful socialist pamphlet. But don't try to tell us that your political line is the *only* one. As you've demonstrated (but not admitted) we can all learn something from each other...
Dave Elliott



Letters

LONGO MAI? NO THANKS!

I was very pleased to see your article about Longo Mai in UC 40. I had decided to go there after reading about the community in some magazines and hearing about it from friends who had not been there. I arrived on Friday 27th June at about 5 o'clock. There was no reception, but I was told to go to the dining room and wait there.

I waited there while some children ate their supper and no one approached me. After about two hours some of the people began to come in from work. Eventually supper was served, no one asked me if I wanted anything to eat. After 15 minutes someone asked me if I wanted something to eat, but I had to ask him to get the cutlery and a plate for me. It must have been around midnight when I asked where I was sleeping because I was quite tired after travelling from England. The man sitting opposite me replied that first they were all going to have a meeting, and then I was going to talk about myself to the group. I protested that I was too tired and eventually an Englishman came to me and virtually interrogated me. He wanted to know exactly what I had been doing in the last few years. He told me also that I looked very self assured and that normally persons such as me did not usually come to Longo Mai.

"There are usually three types of person that come here:

- 1) Young people, sometimes teenagers, who come here alone looking for an alternative and seeking stability.
- 2) Groups of young people who come to realise projects.
- 3) Business men who come to look around the farm and donate money."

For him I didn't fit into any of these categories. He went on to say certain things such as that they didn't need tourists there. I replied that you could not understand a place by staying three hours, but it was necessary to stay there for a few weeks before it was possible to decide whether I liked it. I was not allowed to join for any trial period and the people had to vote on me there and then.

He began to speak to the group in French on my behalf. I was lucky to be able to understand French quite well, and I realised that he was twisting around what I said to make it sound humorous. Whereupon all forty of them would burst into laughter, such as 'should we make him pay for the meal', 'should we order a taxi to take him away or let him stay the night'. During his speech a girl said that maybe I was trying to find myself. This was the only thing that was said in my favour. Later she walked out on the meeting. The

vote was taken, a unanimous decision. Eventually they decided I could stay for the night. It was 2 o'clock and I decided to go. I had a very strange feeling of hostility towards me. I found my luggage and left.

As I walked down the drive I began to feel slightly scared, that they might come after me. So I decided to walk into a field near the driveway and sleep there. Five minutes later two cars came past. At 5 o'clock the next morning I walked down to the road and caught a lift.

I have been wanting to share my experiences with someone to form some kind of solidarity. I know that it is very easy to see things in a different way and to distort your experiences when you are experiencing something alone. I am also well aware that the literature that was sent to me concerning the community painted a totally different picture than what I actually found there. Many people must have had a similar experience to me, and I would hope that now anyone wishing to embark on a visit to Longo Mai can see the true facts before they go.

I would like to make myself available to any person or group who need more evidence concerning Longo Mai. During the next month I can be contacted at the address below.

Roderick Carr

Five Gables
Prospect Road
Wrekin College
Wellington
Shropshire

REACTIONARY TEACHERS

I thought I would express my concern about the politics of the Alternative Communities Movement, as I heard about it through *Undercurrents*. I went to a meeting organized by a group called the Teachers (the rather elitist name is somewhat suspect). During the course of the evening, I was amazed by the number of right-wing ideologies expressed.

The present Government was praised for (among other things) cutting back the Welfare State, which will make everyone learn to stand on their own two feet.

Poverty is used as an excuse for laziness and lack of initiative. Unemployment does not really exist, as there is plenty of work for everyone who is prepared to look for it. The person who told me this admitted she had never been to the North of England, but she knew Oxford very well and there was certainly no lack of work there. People were becoming dependent on the State. Social workers and benefits are undermining the moral fibre of the nation.

All social problems, it seems, will be solved by communal living, although this may take a long time. When I suggested that maybe time was running out, if the present arms race continues, I

was met by extreme opposition. A nuclear war is simply not going to happen. Computers are becoming more and more sophisticated therefore a mistake is most unlikely. The proliferation of nuclear weapons does not, logically speaking, increase the likelihood of war or accident. Britain needs an independent deterrent. Cruise missiles are a step forward. Objections to the dropping of bombs on innocent populations is soft. Hiroshima and Nagasaki were necessary.

Derisory comments were made about nearly every group who wasn't one of the enlightened few. Left-wing socialists were soft, the liberals woolly, the working class lazy, the Trade Unions selfish, Christians unspeakable, CND pathetic... though I heard no criticisms made of the upper class! Law and order must be strengthened because there are so many hooligans (this is a bit inconsistent with the aim of self-help and decentralization). Surely these reactionary views are not representative of the AT movement as a whole? Yet this group produce a regular newsletter and act as a central co-ordinating committee. Are they self-appointed, or what?

Rose Manson

2 Oakington Way
Hornsey

The Teachers are certainly eccentric, but, as far as we know, harmless. They have no connection with the mainstream of the British 'commune movement', which may be contacted by writing to Lifespan, Townhead, Dunford Bridge, nr Penistone, South Yorks.

PIRATE RADIO

Thank you for the pirate radio article in UC 42. I wouldn't mind having a go myself. I've always loved Free Radio cos I sort of grew up with it listening to my carphone at school instead of learning. One thing that puzzles me is things like - METRES - KILOHertz - MHZ on radios. My friends don't seem to know either. Looking at a radio here now it's got 60-180 MHZ Short Wave. Is 48 Band in this? Also there's CB 27 MHZ where does this come on the scales.

I think it would be a good idea to print a conversion table. Please could you tell me the price of Radical Technology, your book on what to do. I do hope to have a go when I get a job to get cash.

Rob Hartley

Fron Llanrhyddlad
Caerbi
Gwynedd

Radio waves can either be described by their wavelength or by their frequency. To convert from a frequency in MHZ to a wavelength in meters you simply divide 300 by the frequency. So a radio frequency of 6 MHZ has a wavelength of 50 metres. As additional info, 1 MHZ equals 1000 KHz equals 100000 Hz. Radical Technology costs £4.50

SPELL BINDING NOT O.K.

Every so often you carry articles which pick people up on spelling 'mistakes' and 'illiteracy'. Even when it's government signs which are the but of your jibes, I think such comments are out of place in a radical journal. They smack of elitism and can only serve to discourage oppressed people from contributing. (Actually, plenty of Professors 'can't spell' - but they have secretaries and publishers' assistants to tidy up their appearance by the time they reach the bookshops.)

Standardised spelling, like 'correct' grammar and 'Oxford English' and the con about some people 'not having an accent', is all part and parcel of the growth by conquest of the Nation-State and class system. Western Patriarchy privileges the written word over and above non-verbal communication, oral lore, and spontaneous everyday utterance of our mother tongue.

All over the Empire the English ruling class tried to undermine people's confidence in their own ability to express themselves. In Wales the skool-teachers hung a sign round the necks of the first child each day they caught speaking Welsh. That child was in for a beating by the end of skool.. unless they could unload the dreaded 'Wwlesh Not' board onto some other 'offender'.

So it's thoughtlessly hurtful of you to hang a jeering 'Write Not' sign around anyone's neck, O.K.? Just let everyone say it how they speak and spell it how they please, only correcting genuine mistakes (where the sense is unclear - 5% of all 'spelling mistakes' at most?)

One final speculation (stoned again!). The primary face-to-face monkey-magic of gesture and grimace and sound comes before and underlies speech which comes before riting and reading. When the rulers try to police writing perhaps its more than just a question of any old excuse to keep the peasants out of long-distance communication. Perhaps there is method in their madness. Perhaps they are trying to disconnect existing connections and defuse the power of surviving mother-tongue spells, e.g. 'hole' and 'whole' as cosmological correspondences which the Man wants to negate. (Just as the priests were embarrassed by the Sheelagh-na-gigs still visible in a few old Celtic churches.)

A related function of rite ways of spelling is maybe that once they have succeeded in installing their patriarchal spells into our 'sub-conscious', then the system tries to cover up its tracks to make it harder for us to unbuffle and de-programme ourselves. E.g. "Who betrayed Jesus, children?... Yes, Jewdas betrayed Jesus." and later... "Oh no, Lesley, that's not how you spell it."

Magic is O.K. and so is the creative magic alive in playful poetic and liberatory speech and usage (non-metaphorical language is impossible). But patriarchal spelling is a bind/blind.

While I'm on the subject of language-reform, I think you should refuse to print anymore 'mankind-he' pieces. I also think women are right to complain about the use of 'wet' as a put-down, which they believe relates to taboos on 'bloody cunts', breastfeeding and babies. And as someone coming to re-won my w/whole gay self, I didn't like your cartoon on page 23 (UC 41) where Kollontai was calling Lenin and co 'Assholes'.

Despite these criticisms I think you do a good job and bring us all some hope. Best wishes,

Keith Motherson

3, Jordanston Cottages,
Dwr Bach, nr Fishguard,
Dyfed,
Cymru

TOO MUCH THEORY

Some time ago I sent you information on the new Right Livelihood 'alternative Nobel Prize' (another copy enclosed) which I felt would be of great interest to your readers. I was very surprised not to find any mention of this in your latest issue.

Over the past years I have sent you a number of letters, articles and offers to report for UC at my own expense from various conferences etc. I have never had so much as an acknowledgement from you.

I did not really mind as long as I felt that UC provided a good coverage of 'alternative' activities and struggles here and abroad. But that is no longer the case. Increasingly UC is filled with lengthy theoretical articles of the type which I have read (and written myself) in countless magazines over the past 15-20 years.

The coverage of activities as opposed to theories has decreased markedly. An example is your treatment of the Farm people in Tennessee — the most exciting, largest WORKING spiritual/political/a.t./Third World-oriented 'new lifestyles' group known to me (1450 members; active for a decade). Instead of a report of their many activities you print a silly report from two visitors who did not like the food. (Personally I like good food and I liked most of the meals on the Farm.) And when Ina Gaskin replies to UC with some facts, you print only a shortened version!

In the same issue (UC 42) you print information about the 'Practising Midwife' newsletter and the Nukebuster. Both are from the Farm. The price you quote for the Nukebuster (280 pounds) is *wrong*. I paid 330 DOLLARS including converter, battery pack etc.!! Why do you frighten off potential customers by quoting twice the correct price??

Jakob von Uexkull

2 Wybourn
Onchan
Isle of Man

NEASDEN BOND

Please come to my rescue. Some months ago you published an article called Neasden Bond which was about a school (presumably in Neasden) which recycled enough paper for its 100 pupils by means of a contraption involving an old washing machine and a bicycle. I was so enchanted that I had photocopies made for various friends in the ecology movement and none of them (copies) can now be found and I am going **QUITE MAD** with frustration because I would like more details. Possibly the jobs creation scheme or YOP or STEP or other organizations might be interested and anyway I want to know **HOW**. I have reached my limits of enquiry. I even wrote to the Colchester Head of education who passed my letter on to someone else but no joy.

If I weren't an arthritic octogenarian and had a car, I would set out on a safari and **FIND** it.

So will you please unearth the issue in question and send it to me at your earliest convenience? I enclose a slight donation for your trouble. I have been a subscriber for years. I lend my copies out and then of course I don't get them back.

Don't leave it too long. I might be dead!

Cicely Marsh

Westholme
3 Belmont Road
Hale
Cheshire

I can't even find a decent piece of notepaper!

I think it may have been years rather than months ago. There is a gap in my mind of about two years while I was looking after my paralysed husband and I can't sort it out.

Thank you for the donation. I hope we have answered your query satisfactorily in our letter to you. please write again if not.

FRAGMENTS HIT BACK

The new piece by Tam Dougan on Beyond the Fragments in UC 42 gives a totally personalised view of the conference. It is all very well giving your own impressions of an event, no one can be totally objective, but there should have been some sort of overview.

However what finally inspired me to write this letter was the rubbish written about anarchy not being an acceptable fragment. The man who grabbed the microphone at the end used physical force (in the best traditions of patriarchy but truly ironical at this particular event) to put across his views. There was limited time at the end of the event so there had to be restrictions on the number of people who could speak. This man simply demanded priority. Does anarchoism mean that the strong prosper whilst the weak go to the wall?

Bill Flatman

57 Guilford Avenue
Surbiton

Surrey

SEXUAL/SEXIST

Like your correspondent Kathryn Harris (UC 42) I was surprised by the cartoon accompanying the article *Orgasmic Labour and National Economic Planning* which showed a shop called the "W. Reich Engineering Co-op." I think it is only fair to point out however that the author John Southgate had nothing to do with the choice of cartoons and was not happy with the inclusion of this one with his article. The cartoon is what Reich himself would have referred to as 'secondary level'. By this he meant something which appealed to the distorted (and often sadistic or masochistic) sexual desires which are present but repressed in most people because although a product of patriarchal society they are also unacceptable to it: patriarchy doesn't care to admit that the idealisation of motherhood and the degradation of women in pornography are two sides of the same sexually repressive culture.

While your cartoon is not pornographic it is certainly crude and tasteless. One of the unfortunate results of sexual repression is that mention of sexuality tends to produce one of two extreme responses. One is the titillating, pornographic or smutty joke response of the 'secondary level' — reflected in your cartoon. The other is the puritanical and overtly repressive — a trap I feel Kathryn Harris slides towards in her response to John's article. It is for example her and not John who defines sex as 'foreplay—penetration—climax' and then goes on to condemn him for this — condemning him for something he didn't in fact say and wouldn't have said. Her accusation of sexism seems to me misplaced and to derive more from her reading of the article than from what it actually says. Why is it sexist to say that things are sexual?

I do not think it is sexist to say that our creative energy is sexual; nor to suggest that creative sexual energy follows a particular pattern; nor to argue that an understanding of sexual repression and its effects on our work life is essential in creating a different type of society. Sexual repression isn't something that men do to women. It's a force that derives from patriarchy and affects all of our sexual, emotional and work lives, albeit in different and important ways depending on whether we are male or female.

Finally, just for the record, the work collective that produced the pamphlet *Co-operative and Community Group Dynamics* on which much of John's article is based is not all male. It is predominantly female (and feminist) and we experienced some good orgasmic cycles in the process of producing it.

Rosemary Randall

15 Spencer Street
New Bradwell
Milton Keynes

MORE AT PLEASE

Thank you for sending the complementary copy and the final subscription reminder.

I was really in two minds as to whether to subscribe again. I feel that there are too few articles on the alternative technology aspect, and too many on politics and sociology for my particular liking.

There is real scope for new thinking on the technology aspect. It is well known that windmills and heat pumps work and work well. However, their cost makes them uneconomic to all but the eccentric. As the cost of fuel rises, so does the cost of alternatives. Therefore if alternatives are to be adopted by the general public, then there has to be engineering changes to find materials and construction methods that are half the present prices. Also there has to be marketing changes so that the overheads of distribution and advertising can be reduced.

A good DIY design must use parts that are readily available at low cost. That is why the otherwise inefficient Slavonius aerogenerator is popular. Oil drums and car bearings are obtainable as scrap.

Anyway, I have decided to renew my subscription for a further year in the hope that more practical articles appear. The "Sail Wing Darrieus" article made me change my mind this time. Nevertheless, this machine seems more expensive to build and larger than a Slavonius of equivalent output, and certainly more complicated.

John de Rivaz

West Towan House
Porthtowan
Truro

ALIVE AND MALE



In UC 42, page 30, Martin Ince trots out the trendy assumption that God is dead as if it were an established fact. Actually there are vast quantities of incontrovertible evidence that he's alive and well and managing a successful universe.

Robert Morison

34 Elm Grove
London N8

We like to get your letters but please keep them SHORT: long ones may have to be cut to fit. Deadline for UC44 is Wednesday January 7.

SMALL ADS

Sell your solar sauna here!
Still only 4p per word; box nos. £1.25.
Copydate UC44: Wednesday December 31.
All ads must be PREPAID please.

KILQUHANTY House, a small (30 boys and girls) very well established (1940), lively (all the arts and crafts for real) progressive boarding school in S. Scotland requires a person of imagination who enjoys cooking healthy meals. Write John Aitkenhead, Kilquhant House, Castel Douglas, Scotland.

HOMELESSNESS is a crime — activists needed. Full-time volunteers are needed to help run a Day Centre for homeless people in Cardiff and go campaign for housing rights. Six month minimum — separate volunteers flat — free food + £10 p.w. Full details from Cardiff Cyrenians, 90 St. Mary Street, Cardiff.

FOR sale — bicycle shop and repairs business, of 50 years standing, as a going concern. There is also a dwelling above the shop, and a garage at the back. The present owners, who are retiring, are asking £20,000 for it, plus stock. If interested, act quickly as otherwise the owners will have to sell to someone who wants the premises empty, which they are reluctant to do. Details from Kathleen Thomas, 'Treflys', Mount Pleasant, Dolgellau, Gwynedd.

WHOLE Meals In Minutes recipe book 60p (45p) & 'Nuclear Power? No Thanks!' booklet 45p (34p) including p&p. 30 or more books at rate in brackets — cash with order to Cambridge Friends of the Earth, Bath House, Gwydir St., Cambridge.

PREDATORY man is destroying the world! Help pioneer aware and compassionate living the healthy, sustainable, vegan way. Send 65p for recipe booklet with self-sufficiency gardening hints and full supporting leaflets. Vegan Society Dept. F, 47 Highlands Road, Leatherhead, Surrey.

RADIO News! Alternative broadcasting, how to set up a legal community radio station, FRF contains many usual (and not-so-usual) articles of free radio, plus how free radio and alternative technology can be linked! FRF is only 15p, but it's fully litho-printed. (15p is a minimum price, higher donations accepted with great thanks.) Send 15p plus a largish SAE, P.O. Box 35, Wellington, Telford, Salop.

CALENDAR, 1981. Illustrated conservative theme for each month on A3 recycled paper. 75p. Surrey/Hants border Friends of the Earth, 30 Florence Road, Fleet, Hampshire GU13 9LQ. Bulk enquiries Fleet 3144 evenings.

THE COMING AGE: magazine of the living matriarchal tradition. 45p. Lux Madriana (U), 40, St. John St., Oxford.

JUST published: Street Video £1.80; Video With Young People £3.40; Basic Video £1.80 Post free. Cash with order to CATS, 42d Theobalds Rd, London WC1X 8NZ.

RURAL Resettlement Handbook. Second edition revised and enlarged. 220 pages of practical, financial, legal, social and personal information about rural resettlement. An essential reference book for rural dwellers, aspiring small-holders, armchair resettlers, and everyone concerned with the countryside. Only £1.80 post free from Rural Resettlement Group, 5 Crown Street, Oxford.

LEICESTER commune starting, with members interested in personal growth/therapy/co-counselling/or Rajneesh. We want the group to be on the side of feelings, risk, openness and honesty, not safety and closed-downness. No projects planned yet — they can develop out of the energy of group members. We want to develop our own creativity. We need members (especially men), capital, advice, building skills. Contact Janet 0533-775291, Clancy 21 Bartholomew St., Leicester, Brigit 0533-716500.

SOMERSET — opportunity exists to buy large house 5 acres garden — 10 people with £1,000 minimum needed. Potential for workshops, conferences etc. Please write with few details of yourself to Lynne Troughton, The Wing, Swifts, Milverton, Taunton, Somerset.

BOOKS BY POST

HYDROPOWER — Andrew Mackillop. Sections on turbines and wheels showing how to construct a small wheel and Pelton turbine. Sections by turbine builders. How to measure power available. Legal aspects. Off-the-shelf and built-up equipment. £2.50 each.

METHANE — Steve Sampson. Editor — Andrew MacKillop. Over 30 different designs suitable for D-I-Y installations, farms, communities, and horticulture. Biological and biochemical background. £2.50 each.

BLUEPRINT FOR SURVIVAL — The Ecologist. Essential reading for all those concerned with the environmental crisis, and its solutions. £4.25 each.

THE ENERGY CRISIS. From a speech given by Lord Avery. Limited number available. 45p each.

Also — **UNDERCURRENTS BINDING FILE.** Details elsewhere.

All prices inc. p&p. Overseas postage 20% extra. Cheque/PO to: Falcon Books, Dept. UC, 13 Hillside Rd., Marlow, Bucks SL7 3JU. Allow 4 weeks for delivery.

OLD Hall, East Bergholt, near Colchester has vacancies for permanent members with capital. Units available ranging from £5,000, £7,000 and £20,000. Members share in all community facilities including 56 acres of land. Tel Colchester 298-294.

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GLASGOW Bookshop Collective is setting up an alternative bookshop co-operative and needs cash to get things going. We would like donations and loans. If you'd like to help provide a much-needed resource in this city, contact: Glasgow Bookshop Collective, c/o 146 Holland Street, Glasgow G.2.

WOMAN, 27 yr., daughter, 6 yr., are seeking alternative ways of living, preferably on the coast/island. Quite ordinary, not very idealistic, consider ecology important, weaver, professionally trained for the health service. Fond of rural life, a few people and the sea. Likes Scotland and Ireland. Got a sense of humour and some money. B.L., 16 Springland Close, Ipswich (0472) 711443.

RURAL sharing. House on Norfolk/Suffolk borders with 3 adults and one child has room for another family group/person interested in rural life and the positive aspects of sharing. Very keen to share child care. Own kitchen and bathroom available. Joint ownership or other arrangement, eg. work instead of rent. Prefer someone with skills relevant to setting up small industry (not crafts) and/or interested in alternative energy/heating methods, but not absolutely essential. Our small-holding activities (3 acres) are organic where possible. Please write Box No. MOF enclosing a phone no. if you can.

NON-SEXIST, Socialist/radical? Join similar minded London people for social activities, discussions, theatre, pubs, parties etc. (shift workers welcome). Contact Richard 348 7187 (6—6.30 best).

LARGE cottage on the edge of natural fenland in Norfolk, with half an acre of remarkably fertile garden. 3/4 bedrooms, farmhouse kitchen and really quiet, but not far from the small town of Diss. Offers on £37,000. Tel. Diss 3995.

TYNESIDE, mixed communal household, kids, seeks 2/3 people with/without child. Contact Jane Adams c/o First floor, 35 Park Lane, Newcastle-upon-Tyne.

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RECYCLED greeting cards are back! Three designs for Xmas/New Year (and later): Year of the Rooster, Trees, cut-out Windmill. 30 mixed, £3 incl. p&p with envelopes. Recycled pads, duplicating paper etc. also from: Regenes, Tress House, Stamford St., London SE1 (01-633 9557).

WANTED: Gents racing bike, for 6' person. Contact Nick on 01-278 6327.

HANDSPUN wool for knitting, crochet, or weaving. Make something warm and beautiful this winter. Send stamp for samples to Pamela Atkinson, Cappacashen, Kinvara, Co. Galway, Ireland.

UNIQUE holiday on organic small holding with 77 acres of wooded nature reserve within Exmoor National Park. Sea 4 miles. Eight camouflaged caravans, modern toilets. See please — Cowley Wood, N. Devon. Parra-200.

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AUTUMN READING UNDER HALF-PRICE UNDIES!

The success of the *Undercurrents* Summer Sale means that we can make another amazing seasonal offer with back numbers at less than half price! Nos. 8, 12, 14, 15, 16, 17 and 18 for only £2 10; Nos. 21 to 30 or 31 to 40 for only £3. Going one better we can offer the whole set, 8 to 40, for only £7, post-free, worldwide! Single copies are 40p. We regret that Nos. 1 to 7, 9, 10, 11, 13, 19 and 20 are out of print.

- 8 Centre for AT; Organic gardening; Pirate radio; Building with rammed earth; Wind theory; Hermeticism; Comtek 74; BRAD; London's tunnels.
- 12 Lucas Aerospace; Crabapple; Biofeedback; Community Technology; Comtek 75; Alternative Culture (3); Alternative Health Service.
- 14 Lucas & AT; Jack Munday; Overseas AT; Hillside Cottage; Building & natural energy; Shutter design; Alternative Technology in India.
- 15 "Who Needs Nukes?"; Biodynamic gardening; Wind generator progress report; Inverter design; Insulation & jobs; Production for need.
- 16 People's Habitat: NATTA; Citizen's Band; Garden villages; Tree farming; DIY new towns; Self-sufficient town houses; Lifespan; Planning.
- 17 Inner Technology: Save your own seed; Computer ley hunting; 17th century radical science; Dowling; Kirlian photokit; Women & AT.
- 18 AT & the Third World: Irrelevant technology; 2nd class capitalism; Chinese science; Supermacker; Green ban; Hydroponics; Ley lines.
- 21 Good squat guide; Dangers of counter-culture; Broadcasting; Reich; Nuclear policy; Iron age farm; Lauriston; Peace conversion; DIY print.
- 22 A doctor writes; Ireland; Paranoia power (1); Stonehenge; Primal therapy; Cod war; Fish farming (1); Ripple revolutionism; Free radio.
- 23 Seahook; Nukes & unions; Fish farming (2); Wastewater; Lorena stoves; Charles Fort; Solar collector; VHF transmitter; Paranoia Power (2).
- 24 Chicken's lib; Namibian health; Windscale; VHF transmitter (2); Duncan Campbell on the Eavesdroppers; Forestry; Cheese & cider making.
- 25 Emotional plague; Findhorn; Compost & communism (2); Water power; Antur Aelhaem; Oz community radio; Punk; Thailand; Positive Sabotage.
- 26 AT & the Portuguese revolution; The Russians aren't coming; Boat repairs; New Age Access; Orkney crofting; Growing dope; Packaging; ELF.
- 27 Soft energy: hard politics; Fast breeders; Tools for small farms; Brookhouse Ampersand co-op; Fish farming; The Shakers; DIY Woodstove.
- 28 Windscale; Twind; Atlantis; Mondragon; AT & the State; Canadian AT; Behaviour Mod; Bicycle planning; Urban wasteland; Can Wales make it?
- 29 Women & Energy: Windscale; New Clear Energy; Feminists against nukes; Women & Science; Womanthought; Alice & ATman; Skill exchanges.
- 30 Windscale; Ecofeminism; Solarcal; AT & the British State; Alice; Muscle powered revolutionary samadhi; Greening socialism; Parish politics.
- 31 Food politics: Factory farming; Additives; Wholefood co-ops; Commodity campaigns; Common agricultural policy; Potatoes; Grain dealing.
- 32 Ecopolitics: British road to Ecotopia; Larzac; Nukes & the unions; Workers' plans; UKAEA; DIY VHF transmitter; Shotton; Micro.
- 33 Planning: Garden cities; Urban wasteland; National parks; Shetland; Country life; WWOOFing; AT workshop; Energy options & employment.
- 34 Co-op lessons; Crabapple; UNCSTD; Earthcare; Counter-Revolution Quarterly; Feminist anti-nukeism; Ian Lloyd; Engineering; Rural reality.
- 35 Comtek 79: Wave power; Teamwork Training Trust; Campaign for the North; DIY Woodstove design; Decentralising AT; Greentown.
- 36 Children & the Environment: Future perfect; City jungles; Alice; Flysheet camps; Ma Gaia; Community schools & service; Free schools.
- 37 Third world energy: FAO food conference; Street fightin' man; DIY biogas; compost; Ecotopia; Environmental education; Karen Silkwood.
- 38 Anti-nuclear Campaign: Denmark; Seahook; Guerilla tactics; The English Earthquake; The Russians and Nicola Tesla; Animals or Ethics.
- 39 Communes: Co-operative work; Fairground; Christiania; Communes & anarchism; Pearce's polemic; US Windpower Inc.; Scandinavian AT.
- 40 Fusion: Wave power; Longo Mai; Viewdata; Deprogramming; Ecotopia; Third World Rip-off; Canals; Jobs & Social Change; French Antinukism.
- 41 Co-operators Fair: Suma; Winds of change; Working collectively; Organic labour; Macho nations; Capitalism and Co-ops; Delta-T; Co-milit.
- 42 Protopia: Convivial computing; Manifesto for the 80s; END; Kyshtym; NATTA; Tesla; Darrius windmill design; Pirate Radio.



WHAT'S WRITTEN

Undercurrents is an open forum for radical and alternative ideas; we have only a couple of regular contributors so we depend on a steady flow of unsolicited articles and ideas to fill up the magazine. Here are some guidelines to encourage prospective writers to get busy:

MONEY

Undercurrents does not pay for contributions but authors get a free one year sub for each article printed.

FORMAT:

Articles should if possible be typed double-spaced with generous margins, on one side of the paper only.

LENGTH:

The normal maximum length is three pages (3000 words plus pictures); longer articles will be reluctantly considered for publication on their merits.

STYLE:

Articles should be written in plain English, with short sentences and plenty of paragraphs.

SPARE COPIES:

Always keep a spare copy of anything you send us; both our editors and the Mails are fallible!

PICTURES:

Photos should be black and white, prints not transparencies; line drawings should be in black ink on plain paper; cartoons are always welcome — we can redraw them if necessary.

REVIEWS:

are always welcome; also suggestions of titles for review and offers to write in future issues.

NEWS, SCANDAL AND GOSSIP:

are also needed, particularly from outside London and from abroad.

CHESTER College of Higher Education offers B.A. and B.Ed degree courses in various subjects including Mathematics, Biology and Liberal Studies in Science to those with almost any two 'A' levels and suitable 'O' levels (alternatives such as ONC will be considered carefully). The Biology is environmentally oriented and Liberal Studies in

Science is mainly devoted to the social implications of Science and thus should interest Undercurrents readers. Serving teachers may apply for a one year full time course in these subjects. There is also a B.A. in Health and Community Studies. Details from David Hooper, Science Dept., Chester College, Cheyney Road, Chester.



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EDITORIAL OFFICE: 27 Clerkenwell Close, London EC1R 0AT.
Tel: 01-253 7303

ACCESS: The benevolent oligarchy known as the UC collective meet every Wednesday from 7 pm on to cobble the magazine together, pay the bills and gossip, adjourning as early as possible to the back bar of the Crown Tavern. These meetings are open to all friends of the magazine. The office is not staffed at other times but Simon Woodhead, our subscriptions co-ordinator and factotum is often working there on Wednesday afternoons; on other days there is often a member of the collective in the office around 2 pm opening the mail.

Outside these times urgent enquiries may be addressed to Chris Hutton Squire on 01-261 6774.

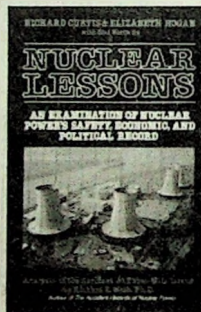
CREDITS: *Undercurrents* 43 was put together by Bridget Hadderly, Dave Elliott, Dave Kanner and Godfrey Boyle (*Features*), Stephen Joseph (*News*), Peter Culshaw (*Reviews*), Bill Flatman (*Letters*), Mike Barber (*What's On*), and Helen McEwan (*In The Making*) aided and abetted by Chris Hutton Squire, Tam Dougan, Simon Woodhead, Lowana Veal, Martin Ince, Peter Glass, Vicky Hutchings, Val Robinson, Nick Hanna and some persons unknown. Typesetting by Jenny Pennings (01-226 1258) and Community Typesetters (01-226 6243). Cover drawn and designed by David Hall. Our thanks to the Collective At Large for advice, encouragement, spontaneous contributions, etc.

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needed to administer the existing programme consisting of a number of health workers and other skilled personnel working in a refugee self-help project in the north of the country and to investigate the possibilities of further projects. Candidates should have as much of the following as possible:

- knowledge of the situation in the Horn of Africa
- overseas experience preferably in Africa
- experience of working in community-based projects
- administrative experience

Couples who wish to work on a job-sharing basis are welcome to apply. Two-year minimum contract.

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EQUADOR

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Write to: CIIR Overseas Section, 1 Cambridge Terrace, London NW1 (Tel: 01-487 4397) sending full details of your previous experience. Please quote ref: UC.

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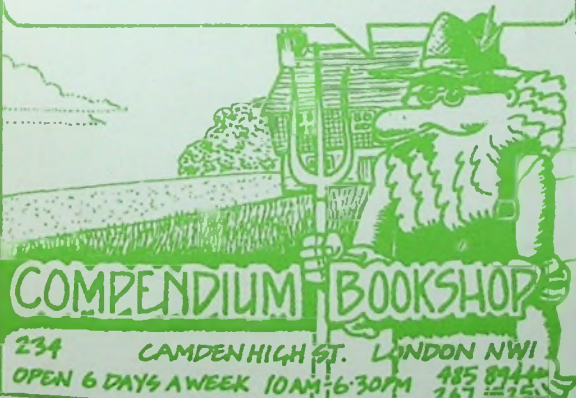
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The Winco Wincharger has been produced in many thousands since 1936 and is used in remote and hostile locations all over the world.

WINCHARGER

A special low-speed generator is direct-coupled (no troublesome gearing) to a 6ft dia, high-speed propeller, giving an output starting in a 7 mph breeze and rising to 200watts (12v or 24v DC) at a wind speed of 23mph. The famous air-brake governor then prevents over-speed problems.

For unattended locations in extreme weather conditions Northumbrian Energy Workshop can provide a 'super-heavy-duty' version with additional weatherproofing and an uprated turntable arrangement. This, linked with our 10m 'easy-erect' tower and a special battery controller, which transfers any output to heating elements when the battery is fully charged, provides a high reliability unit for remote and hostile sites.

Our range of wind equipment includes:

- Analogue windspeed indicators.
- Windlogger - a microprocessor-based wind regime analyser.
- 'Easy-erect' anemometer towers.
- 'Easy-erect' wind turbine towers.
- Battery control boxes.
- Inverters (synchronous and independent up to 6kW)
- Full range of electricity-producing turbines up to 22kW.
- Full range of new and second-hand water-pumps and turbines up to 1000gal/hr.

Northumbrian Energy Workshop can also undertake to provide special one-off items for wind turbines, building rotors, towers or complete machines. We also carry out wind analysis investigations and feasibility studies and have a range of anemometry for hire.

Write for advice, further details and prices to:

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